REPORT RESUMES

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PROCEEDINGS OF A WORK CONFERENCE ON BIBLIOGRAPHIC CONTROL OF NEWER EDUCATIONAL MEDIA CONVENED AT INDIANA UNIVERSITY, OCTOBER 5-7, 1960.

BY- RUFSVOLD, MARGARET I.   GUSS, CAROLYN
INDIANA UNIV., BLOOMINGTON
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THIS CONFERENCE REPORT SUPPLEMENTS TWO OTHERS WHICH DEALT WITH AN INVESTIGATION INTO THE PROBLEM OF ADEQUATE BIBLIOGRAPHIC CONTROL OF NEW EDUCATIONAL MEDIA. THE TWO PREVIOUS REPORTS BY THE SAME AUTHORS ARE ENTITLED "SOME SOURCES OF INFORMATION ABOUT NEWER EDUCATIONAL MEDIA FOR ELEMENTARY AND SECONDARY SCHOOLS (1950-1960)" AND "A PROPOSED METHOD FOR ESTABLISHING BIBLIOGRAPHIC CONTROL OF THE NEWER EDUCATIONAL MEDIA FOR THE PURPOSE OF INFORMING TEACHERS CONCERNING AVAILABLE MATERIALS AND THEIR EDUCATIONAL UTILITY." BACKGROUND INFORMATION WHICH LED TO THE CONFERENCE WAS PROVIDED IN CHAPTERS 1 AND 2 OF THIS REPORT. THE REPORT CONTAINED THREE ADDITIONAL SECTIONS--(1) THE NEEDS FOR BIBLIOGRAPHIC CONTROL OF NEWER EDUCATIONAL MEDIA AS DEFINED BY THEORETICIANS AND ACTUAL CONSUMERS OF BIBLIOGRAPHIC SERVICES, (2) A DESCRIPTION AND CRITICAL APPRAISAL OF METHODS OF STORAGE, RETRIEVAL, AND DISSEMINATION OF INFORMATION, AND (3) REACTIONS TO THE PROPOSED METHOD FOR ESTABLISHING BIBLIOGRAPHIC CONTROL OF THE NEWER EDUCATIONAL MEDIA AND RECOMMENDATIONS. GENERAL INFORMATION ABOUT THE CONFERENCE INCLUDING THE AGENDA, THE LIST OF PARTICIPANTS, AND RELEVANT CORRESPONDENCE IS INCLUDED IN THE APPENDIXES. (JH)

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PROCEEDINGS OF WORK CONFERENCE ON BIBLIOGRAPHIC CONTROL OF NEWER EDUCATIONAL MEDIA

CONVENED AT INDIANA UNIVERSITY, OCTOBER 5-7, 1960,

UNDER THE SPONSORSHIP OF THE U.S. OFFICE OF EDUCATION

A Report to the U.S. Department of Health, Education
and Welfare, Office of Education, Prepared
under Provisions of Title VII, National
Defense Education Act of 1958 (PL85-864)
Contract SAE-9033

Prepared by
Margaret I. Rufsvold
and
Carolyn Guss

Indiana University
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Margaret I. Rufsvold
Margaret I. Rufsvold

Carolyn Guss
Carolyn Guss

Indiana University
Bloomington, Indiana

November 5, 1960
Date

*Supplemented by two earlier reports--one dated April 20, 1960, entitled Some Sources of Information about Newer Educational Media for Elementary and Secondary Schools (1950-1960), 152 pages; and the second dated May 14, 1960, entitled A Proposed Method for Establishing Bibliographic Control of the Newer Educational Media for the Purpose of Informing Teachers Concerning Available Materials and Their Educational Utility, 32 pages.

ABSTRACT OF THE REPORT

This conference report supplements two others which deal with an investigation into the problem of adequate bibliographic control of newer educational media. The two previous reports by Rufsvold and Guss are entitled *Some Sources of Information about Newer Educational Media for Elementary and Secondary Schools (1950-1960)* and *A Proposed Method for Establishing Bibliographic Control of the Newer Educational Media for the Purpose of Informing Teachers Concerning Available Materials and Their Educational Utility*. Background information which led to the conference is provided in Chapters I and II of this report.

The report contains three principal sections:

Part I	The needs for bibliographic control of newer educational media as defined by theoreticians and actual consumers of bibliographic services are discussed in Chapter III.
Part II	A description and critical appraisal of methods of storage, retrieval, and dissimination of information are given in Chapter IV.
Part III	Reactions to the proposed method for establishing bibliographic control of the newer educational media and recommendations are given in Chapter V and VI.

General information about the conference--the agenda, the list of participants, and relevant correspondence--is included in the appendices.

TABLE OF CONTENTS

Chapter Page

I. INTRODUCTION 1

II. RUFSVOLD-GUSS PROPOSAL—BACKGROUND AND RELEVANT QUESTIONS 2

III. NEEDS FOR BIBLIOGRAPHIC CONTROL OF THE NEWER EDUCATIONAL MEDIA 10

General—I. Keith Tyler 11
Public Schools—W. Roger Zinn 18
State Department—W. H. Durr 22
Universities—Charles F. Schuller 28
Public Libraries—Irving Lieberman 31
Foreign Language Teachers—A. Bruce Gaarder 38
Science Teachers—Richard Paulson 41

IV. METHODS FOR STORAGE, RETRIEVAL AND DISSEMINATION OF INFORMATION 45

Jesse H. Shera 46
Ralph R. Shaw 56

V. REACTIONS TO THE METHOD PROPOSED FOR BIBLIOGRAPHIC CONTROL OF THE NEWER EDUCATIONAL MEDIA 65

American Library Association—Pauline Love 66
Audio Cardalog—Max U. Bildersee 71
Department of Audio-Visual Instruction—Anna L. Hyer . . . 75
Educational Film Library Association—Emily S. Jones . . . 79
Educational Screen—Paul C. Reed 84
Educators Progress Service—Arthur P. Horkheimer 87
Landers Film Reviews—Bertha Landers 93
Library of Congress—C. Sumner Spalding 98
Educational Television and Radio Center—Robert B. Hudson. 102
U.S. Office of Education—Mary Helen Mahar 106
R.R. Bowker Co.—Daniel Melcher 108

VI. RECOMMENDATIONS FOR IMPLEMENTING A NATIONAL SYSTEM OF BIBLIOGRAPHIC CONTROL OF THE NEWER EDUCATIONAL MEDIA . . 113

Discussion Group One 114
Discussion Group Two 116
Discussion Group Three 118
Discussion Group Four 120
Final Recommendations Adopted by Conference 121
Conference Directors' Summary Statement 124

Page

APPENDIX A: Agenda of USOE Work Conference on Bibliographic Control of Newer Educational Media 125
APPENDIX B: Conference Participants with Bibliographical Statements 129
APPENDIX C: Letter from A. P. Horkheimer, Educators Progress Service, to Dr. Seth Spaulding, USOE, in Reaction to Conference Recommendations 145
APPENDIX D: Letter from Howard Haycraft, President of H. W. Wilson Co., Stating Their Position Relative to Continuing Educational Film Guide and Filmstrip Guide. 148
APPENDIX E: Letter from Anne Cotter, President of Filmscope Inc., and Statement Regarding a National Directory of Educational Media 151

INTRODUCTION

The Educational Media Council, meeting in East Lansing, Michigan, June 6-7, 1960, following a review of the Rufsvold-Guss, May 14, 1960, report, *A Proposed Method for Establishing Bibliographic Control of the Newer Educational Media*, passed a resolution that "A project be initiated at once with USOE to prepare a National Directory of Newer Educational Media and that a project committee be appointed to implement this proposal." Chairman Charles F. Schuller appointed Lee W. Cochran to head such a committee composed of Anna L. Hyer, Emily Jones, Robert Hudson, Carolyn Whitenack, and Don White to carry out the action prescribed by the resolution.

The Committee agreed that a work conference of approximately twenty-five persons representing such fields as professional librarians, audio-visual communications specialists, users of newer educational media in general subject-matter areas and in such specialized subject-matter areas as modern foreign languages and science, publishers of catalogs and bibliographic services, specialists in the storage and retrieval of information, and representatives of interested professional organizations should be convened for a three- to four-day period. Its basic purpose should be critically examining the proposal and recommending the most feasible method of initiating a national system of bibliographic control of the newer educational media.

Margaret Rufsvold and Carolyn Guss were invited by Mr. Cochran to develop such a conference within the rationale determined by the Committee and to prepare a report of the conference. A contract making funds available for the conference and preparation of the report was negotiated between Indiana University and the USOE (SAE 9033). Members of the Committee recommended persons to be invited and the conference topics to be discussed. On the basis of these suggestions and in frequent consultation with Mr. Cochran, the conference directors selected the location and dates, developed a conference program (Appendix A), and invited participants (Appendix B) to attend the conference and to perform specific functions. They were also responsible for preparing the following report. Throughout the project the conference directors enjoyed the full support of their colleagues, generous use of the facilities of Indiana University, and the able assistance of Richard W. Gilkey and Mrs. Judy Persinger.

The Educational Media Council is scheduled to consider this report in its November 15-17 meeting. It is anticipated that the Council will make specific recommendations to the USOE concerning a feasible method for initiating and sustaining a national system of bibliographic control and dissemination of information about the newer educational media.

THE RUFSVOLD-GUSS PROPOSAL FOR BIBLIOGRAPHIC CONTROL OF NEWER EDUCATIONAL MEDIA— SOME BACKGROUND INFORMATION AND RELEVANT QUESTIONS FOR CONFERENCE CONSIDERATION

Carolyn Guss

For some weeks you have had copies of A Proposed Method for Establishing Bibliographic Control of the Newer Educational Media for the Purpose of Informing Teachers Concerning Available Materials and Their Educational Utility submitted by Margaret Rufsvold and Carolyn Guss to the U.S. Office of Education on May 14, 1960. This report is supplemented by an earlier report dated April 20, 1960, entitled Sources of Information About Newer Educational Media for Elementary and Secondary Schools (1950-1960.) The latter is a 152-page mimeographed report; even though the supply of copies is practically exhausted some copies are still available for use in this conference. Negotiations are underway with the American Library Association for its publication.

To repeat the content of these reports would seem fruitless. I hope, however, that a quick review of the background of these reports and some suggestions concerning questions which this conference might answer would be fruitful.

These two reports constitute the investigators' findings and recommendations resulting from a four-phase feasibility study conceived a year and a half ago (March, 1959) and on which they and their associates have since been working on a part-time basis. The phases, though not completely mutually exclusive, were defined and originally implemented as:

(a) the location, description, and analysis of current indexes, catalogs, and services systematically making available information concerning educational audio-visual materials,

(b) discovering the strengths and weaknesses of existing cataloging tools and services,

(c) discovering suppliers' interests and resources for continuing or modifying existent cataloging tools and services as well as the possibility of creating new methods of making available information concerning instructional audio-visual materials, and

(d) developing a proposal for improving the diffusion of information to users and potential users of audio-visual materials for the purpose of improving instruction. Throughout the study attention was given to the relationship of the cataloging aspects to the availability and distribution of the materials themselves.

Phase A

Drawing upon the investigators' knowledge and experience concerning sources of information about the newer educational media as well as such publications as EFLA's Index to Selected Lists, Eastman Kodak's Visual Aids Sources, the University of Oregon's A Bibliography of Bibliographies of Instructional Aids to Learning, Ohio State University Bureau of Educational Research and Services' Sources of Teaching Materials, and UNESCO's Catalogs of Short Films and Filmstrips and information provided by some of the more than 200 persons to whom the initial list was sent for checking, 122 current sources of information were found to be generally available; 52 catalogs and lists met all other criteria except that of being available.

The experience of the authors in conducting Phase A and the evidence presented in the report seemed to justify the following conclusions:

1. To locate information about available audio-visual materials relating to a particular subject and grade level is a complicated, difficult, and time-consuming task.

2. Information concerning 16mm motion pictures is more generally available than information concerning such other media as phonorecords, slides, filmstrips, radio, and television. Even in the case of films most descriptions treat the entire film and do not provide efficient indexes to individual sequences or sections within the film.

3. Bibliographic services covering the newer educational media as well as interest in and need for such services are rapidly increasing.

4. The retrieval of information recorded in the form of any of the newer media is not only a national problem but also an international one. Such international organizations as UNESCO and the International Scientific Film Association recognize this as a problem. "A Plea for National Indexes" in the December, 1958, Science and Film states, "The main need for all countries to provide central descriptive card indexes, to an international formula of their national resources in educational scientific, and cultural films remains absolutely vital. Until these indexes are brought into being, there will continue to be an enormous amount of waste, duplication and frustrated effort and what the UNESCO General Conference in its original Resolution called 'the full use of the world's resources' will continue to be hampered."

5. It is the hope of many that the process of locating and procuring appropriate audio-visual materials will be simplified and improved.

Phases B-D

Among the factors which contributed to the decision to fuse the last three steps in the study and to investigate them jointly rather than separately were the possible relationship of the outcome to several related studies and proposals, the fact that a longer period of time than originally calculated was consumed in completing Phase A, and the USOE's need for a decision in this area. It is thought that the methodology was not weakened; the major shift involving the investigators' interviewing selected individuals representing those affecting or affected by any changes in bibliographic control of the newer educational media rather than holding regional conferences involving, perhaps, a larger representation. A description of the methodology including the names of persons interviewed by one or both of the investigators is given in the report you have.

You no doubt are aware of the fact that the proposal recommends three services:

1. a national descriptive catalog service covering the newer educational media by individual type and collectively by type on a cross-media basis.
2. subject and/or grade-level lists of materials containing, in addition to the descriptive data provided in the foregoing service, recommendations concerning teaching purposes, specific strengths and weaknesses, actual or anticipated student questions and responses, suggestions for integration with other instructional materials, and a brief comment concerning technical qualities, and
3. a newer educational media information bulletin. (All three of these services should, of course, be as conveniently and inexpensively as possible available to every classroom teacher.)

It is with the first one—a national descriptive cross-media cataloging service that this conference is primarily concerned.

Additional Evidence

Since completion of the study two publications—*Documentation, Indexing, and Retrieval of Scientific Information*, a study of federal and non-federal science information processing and retrieval programs (Document No. 113, U.S. Government Printing Office, Washington, D. C., 1960, 283 pp.) and *Communication Media and the School*, the twenty-second issue of the yearbook of education prepared under the auspices of the University of London Institute of Education and Teachers College, Columbia University, (World Book Co., Tarrytown-on-Hudson, New York, 1960, 592 pp.) have become available. They tend to support the recommendations in the proposal by indicating the crucial need nations have for ready access to information and ideas. They further provide detailed descriptions of systems of information retrieval, and document the problems and progress not only in the United States but in other countries as well. In several instances they lead one to believe that Russia is outstripping the rest of the world in the documentation, indexing, and retrieval of information.

Some Questions

During the study and since submitting the final report the investigators have been aware of certain questions needing answering. There are, no doubt, others which you will raise. Briefly some of the questions I would suggest as those which should be answered before this or a modified national bibliographic service is initiated include:

1. By whom and to what extent will such a service be used?*

2. How large is the universe of each type of media to be cataloged? Is this number sufficiently large to justify a national bibliographic service?*

3. What will be the relationship of a national bibliographic service for the newer educational media to existing sources of information?

4. What will be the relationship of a national bibliographic service for the newer educational media to the total field of education?

5. What are the foreseeable precautions and suggestions for assuring, insofar as possible, efficient location, administration, implementation, and evaluation of a national bibliographic control service for the newer educational media?

6. To what extent will such a service be self-supporting or need subsidization? If the latter, what source or sources might be expected to provide subsidy?

7. In addition to its primary functions, what secondary functions can such a service provide?

Authors' Credo

The proposal represents as of the date of completion our best critical thinking and synthesis of ideas from the literature and the field. No evidence gained since that time would cause us to alter the recommendations. We admit that speculation and some intuition were used; we hope that we have clearly indicated such instances i.e. the estimated budget, space, facilities, and staff needs for such a project.

The proposal is offered as a tentative one with some alternatives suggested. Your criticism is not only welcome; it is earnestly sought. You have been selected as eminently qualified to perform this function.

Only if you feel and exercise complete freedom to question and to criticize the proposal and do recommend a feasible plan and method of implementation will this conference achieve its purpose and the best use be made of whatever physical and human resources may be invested in such a project. We welcome the opportunity provided by this conference to clarify our meaning and to think and hypothesize with you.

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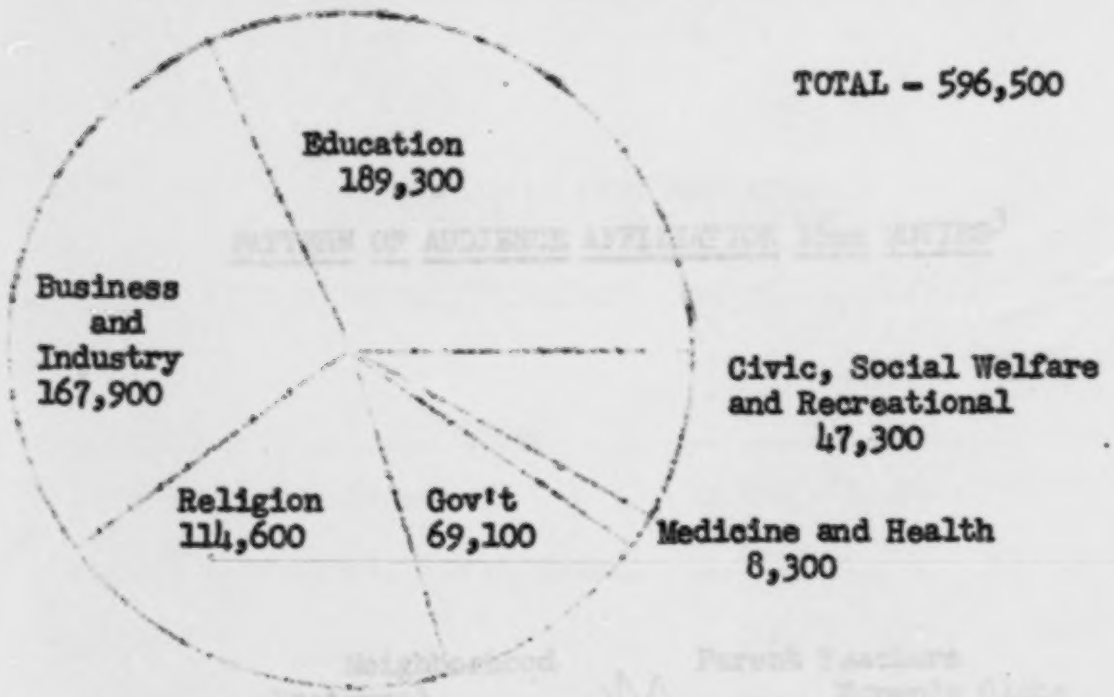
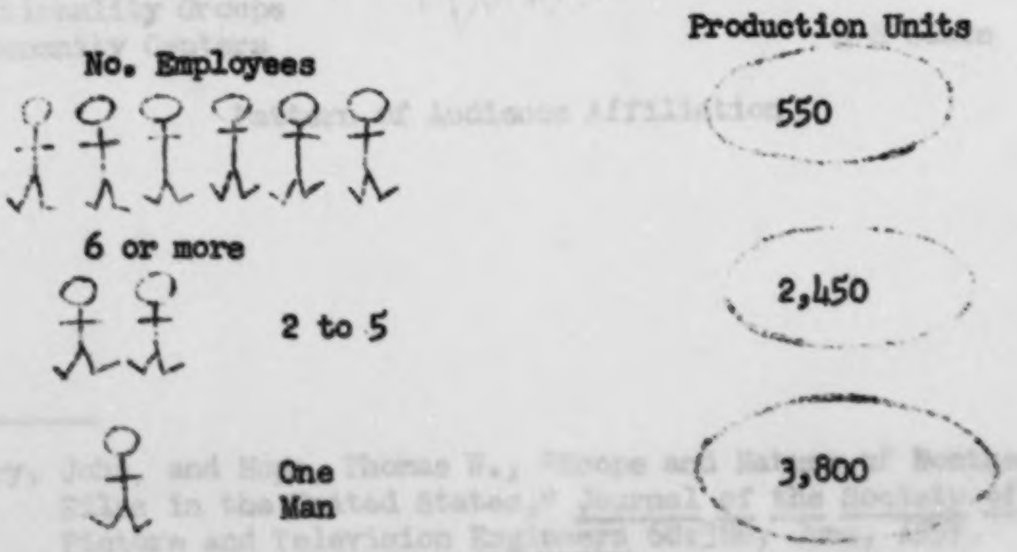
* The three figures and the table which follow were taken from John Flory and Thomas W. Hope's articles in the *Journal of the Society of Motion Picture and Television Engineers* as indicated in the bibliographical references and, in the form of transparencies for the overhead projector, were shown in connection with the first two questions. They are included here at the request of the Conference as possessing information helpful in establishing the parameters of the universe of educational media to be covered by the proposed service and of the potential market for such a service.

OWNERSHIP OF THE 596,500 16mm SOUND PROJECTORS IN USE IN THE UNITED STATES AS OF JANUARY 1, 1959[1]

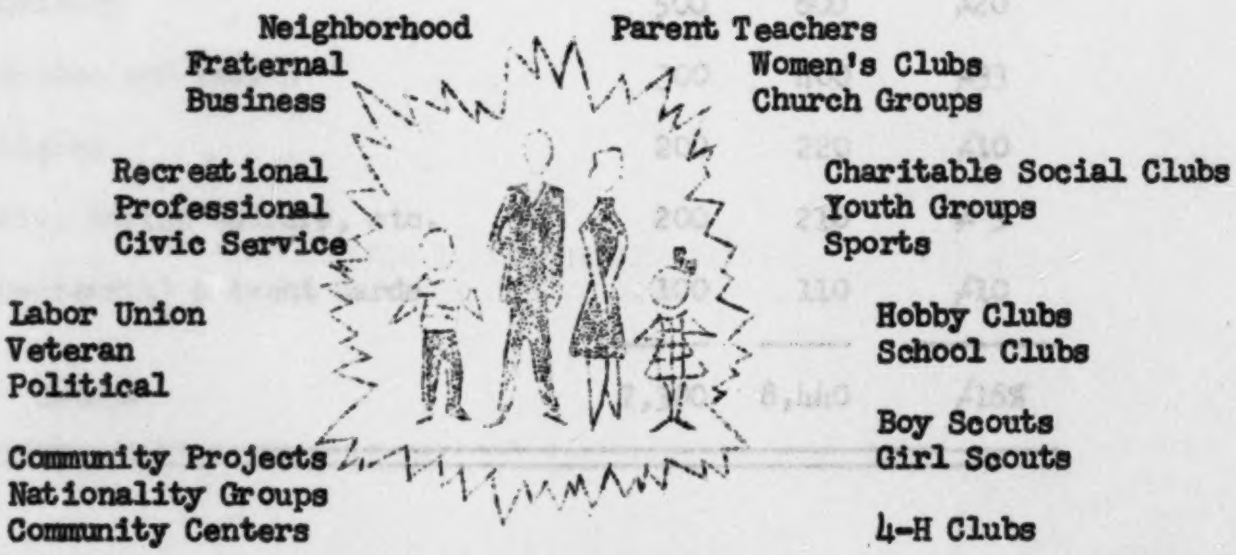


NONTHEATRICAL FILM PRODUCERS IN THE UNITED STATES[2]



1, 2 See next page.

PATTERN OF AUDIENCE AFFILIATION 16mm MOVIES[3]


Neighborhood
Fraternal
Business
Parent Teachers
Women's Clubs
Church Groups
Recreational
Professional
Civic Service
Charitable Social Clubs
Youth Groups
Sports
Labor Union
Veteran
Political
Hobby Clubs
School Clubs
Boy Scouts
Girl Scouts
Community Projects
Nationality Groups
Community Centers
4-H Clubs

Pattern of Audience Affiliation

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[1] Flory, John, and Hope, Thomas W., "Scope and Nature of Nontheatrical Films in the United States," Journal of the Society of Motion Picture and Television Engineers 68:388, June, 1959.

[2] Ibid., p. 388.

[3] Ibid., p. 389.

NONTHEATRICAL FILM PRODUCTIONS[4]

	1958	1959	Percentage Change
Business and Industry	4,500	5,400	+20
Government (Federal, State, Local)	1,500	1,500	no change
Education	500	600	+20
Medicine and Health	300	400	+33
Religion	200	220	+10
Civic, Social Welfare, etc.	200	210	+ 5
Experimental & Avant Garde	100	110	+10
Totals	7,300	8,440	+16%

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[4] Flory, John and Hope, Thomas W., "Non-Theatrical Films--An Interim Report," *Journal of the Society of Motion Picture and Television Engineers* 69:70, January, 1960.

NEEDS FOR BIBLIOGRAPHIC CONTROL OF THE NEWER EDUCATIONAL MEDIA

THE NEED FOR BIBLIOGRAPHIC CONTROL OF THE NEW EDUCATIONAL MEDIA

I. Keith Tyler

The task which has been assigned to me is to present the need for development of an effective means of disseminating information concerning the rapidly growing body of learning materials available in the new educational media. I shall begin by delineating the broad picture as a background perspective in terms of which the problems of this conference may be viewed. I shall then examine more specifically the role of the teacher and the educational communicator, generally, as he attempts to make use of the learning potentials represented in the newer educational media. The larger view is important because we are dealing with a specific manifestation of the crucial problem which everywhere confronts modern man in this age of increasing complexity and ever greater specialization. The basic problem is to make effective use of the constantly growing body of knowledge as it accumulates; to reduce the serious lag between what is known and what is done; to eliminate the wasteful inefficiency involved in perpetuating already outmoded ideas and practices; and to avoid the costly duplication of effort due to ignorance of what is already known or is already available. We are involved with a part of the mounting, baffling problem of information retrieval, a matter of increasing concern to scientists, technologists, scholars, industrialists, librarians, and statesmen.

In the first place, as I am sure we are all aware, we are in the midst of an explosion of knowledge—a rapid increase in what man knows and is discovering about his world. This phenomenon can be better appreciated, I think, by considering a few examples. What has happened in the development of the Harvard University Library, as revealed by Keyes D. Metcalf, its former director, is a case in point. In 1815, this library, then 177 years old, contained 22,000 volumes, and 400 were added each year. By 1854 its total was still fewer than 100,000, although 3000 volumes were being added each year. At the turn of the century, according to Mr. Metcalf, research libraries all over the country were doubling in size every 16 years and Harvard had more than 500,000 volumes. Finally, Mr. Metcalf reported that during his 17 years of service (from 1937 to 1954) Harvard added more than two million volumes and pamphlets to bring a total in that year of 1954 of nearly six million items. Its annual budget in 1937 was $600,000; its annual budget in 1954 was $2,340,000.[1] This is simply a stark example of the sheer accumulation of knowledge as represented in books and related items.

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[1] Keyes D. Metcalf, "Facing the Consequences of Growth." Problems and Prospects of the Research Library (ed. by Edwin E. Williams). The Association of Research Libraries. The Scarecrow Press, New Brunswick, N.J., 1955. Pp 117-127.

Another example which indicates the world-wide extent of this prodigious growth is presented by the increase in the number of technical and scholarly journals. According to Francis Bello, writing in the September, 1960, issue of Fortune magazine, there are from 50,000 to 100,000 technical journals now being published in 60 languages. While the United Statespresently leads in overall numbers, it is interesting to observe that there are more of such technical journals published in Russian than in German; there are more published in Japanese than in French; and there are more published in Chinese than in Italian.[2]

A third example is afforded by a single field of research and scholarship. On the Ohio State University campus is housed an enterprise representing the field of chemistry. It is an information retrieval and dissemination project known as Chemical Abstracts. This organization catalogs and makes available research information from the entire world in the field of chemistry. The number of new entries in this project doubles each eight and a half years, taxing an ever-increasing staff to keep up with this monumental task. Recently, through improved technology, the organization has been able to cut down the lag between research publication and dissemination from eighteen months to ten months; but the burden continues to grow. If one multiplies this phenomenon by the growing number of specialized fields of research and scholarship, one can begin to sense the immensity of the expansion now taking place. But this is not all.

A colleague has called my attention to a factor which would indicate that the problem is even more serious. According to him, there is a bottleneck of publication space in the prestige journals, the more highly regarded publications of many scholarly fields. Rejection rates of scholarly manuscripts run from 50 to 80 per cent, so that the volume of knowledge would seem to be much larger than is represented by publication. Furthermore, there is often a delay of from eighteen months to two years between the acceptance of a manuscript and its actual publication. This, of course, represents a further accentuation of the lag between what is discovered and what is made use of in the field.

In the second place, this tremendous accumulation of research and scholarly knowledge makes the task of rapid information retrieval a stupendous and baffling problem. As Mr. Bello puts it, ". . . the underlying need is for systems that will analyze, store, and on demand accurately retrieve" whatever is needed.[3] He goes on to say, "In practical impact, an effective I.R. (information retrieval) system may ultimately rank with the printing press itself. At its deepest level, the I.R. problem involves the way men classify and relate ideas, the way they express themselves in language, and ultimately the way men think."[4] That we are concerned with an aspect of this general problem is, I think, quite clear. Learning materials in the new educational media are likewise becoming available at an accelerated pace and information retrieval in relation to them has already become a frustrating and difficult task.

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[2] Francis Bello, "How to Cope with Information." Fortune. LXII, No. 3 (Sept. 1960) P 162.

[3] Ibid. P. 162

[4] Ibid. P. 163

Now let us examine the problem from the standpoint of the teacher, the educational communicator, who toils in the midst of this explosion of knowledge. Certain implications for the teacher's role can be drawn from the very problem we have just examined. In the first place there is a constantly increasing amount of necessary knowledge which must be communicated to learners—boys and girls, men and women—in approximately the same amount of time, if these learners are to function satisfactorily in today's world. This places a growing burden upon the teacher for increased efficiency of instruction. In the second place, since knowledge is not only accumulating but often makes outmoded what has gone before, the teacher has the responsibility to see that what is communicated is accurate and up to date, so that learners will not have to unlearn what they previously acquired. In the third place, it can be readily seen that it is increasingly difficult for the teacher himself to keep up to date in his own field as change accelerates. We are all familiar with one attempt on a national basis to meet this challenge of professional refreshment. Continental Classroom, the television series on the National Broadcasting Company network was planned and was continued in an attempt to help high school teachers keep current in science and mathematics in order that they, in turn, might keep their students abreast of new developments. It is not easy for teachers, several years out of college, to continue their growth in a subject field so that they can deal with an increasing and ever-changing body of subject matter.

But the explosion of knowledge is but one of many factors making the task of the teacher more difficult. At this very time, there is increasing pressure upon the educational establishment at all levels—school, college and adult—to do a more effective educational job. Yet the difficulties the schools face are increasing in number and perplexity.

There is, for example, the fact of soaring enrollments. Schools face a series of population waves in the predictable future as the postwar children enter our schools and in turn their children enter and their children's children enter, taxing our resources of buildings, materials, and teachers. Accompanying this is a severe and growing shortage of teachers. Part of this is due to the competition of better paying vocations. The shortage is also aggravated by the fact that we happen at the moment to be graduating teachers who were born at periods of low birth rates so that there are relatively fewer college graduates from whom teachers are recruited. But the lack of status of the teacher in our society detracts from the appeal of teaching as a profession so that recruitment is difficult. These factors, then, are resulting in the employment of substandard teachers and other make-shift "emergency" measures.

Another significant factor affecting the schools is the nature of the tax structure which, in many communities is outmoded and inadequate. School systems find themselves weverely cramped financially and are unable to meet current needs. We see the results in inadequate building programs, shortages of competent teachers, insufficient supervisory personnel, increases in class size, double session, starved audio-visual budgets and other makeshifts.

But there is another factor, less often considered, which greatly affects teachers in our great cities; the increasing migration of American families. Some twenty per cent of American families move each year. This migration represents agricultural workers, construction workers, technologists, engineers, and the very special cases of families in search of better standards of living, the upward mobility of our population. Here there are two complementary trends. On the one hand there are people in the metropolitan areas pouring forth from the heart of the city and settling in the periphery, the suburbs, as they seek better standards of living for their families. They aspire to the suburban life which has become the American ideal of good living. This taxes the resources of the suburban school systems. At the same time people from educationally and culturally deprived areas of the country pour into the decaying hearts of these great cities and throw tremendous burdens upon their school systems. Puerto Ricans flood New York City, rural Negroes and whites from all over the Southland stream into Cincinnati, Chicago, Detroit, St. Louis, Los Angeles, and other great cities. The children, lacking in educational background, present severe educational problems, and this is reflected in a steady lowering of the average I.Q.'s in the metropolitan school systems. But even more serious, from the standpoint of what the teacher faces, is the fact that so many of these children are culturally deprived so that the teacher not only must deal with an increasing range of individual differences, carry out remedial work, and supply missing educational background, but also has the problem of sheer culturization, requiring a curriculum going beyond the customary subject matter. Also many of the children are not adjusted to their new environment and need individual attention, guidance, development of emotional security and the like.

As if this were not enough to indicate the bewildering task of today's teachers, let me also mention the heightened expectation for quality on the part of the public. Due to our scientific competition with Russia, schools are expected to give increased attention to science and mathematics and to teach foreign languages to the point of conversational competence, beginning in the elementary school. Additionally, the current rise in juvenile delinquency suggests that schools must develop more effective citizenship on the part of boys and girls. As a response to rapidly changing knowledge, there is an implied demand that we shift the emphasis in our school objectives from the mastery of content and facts to facility: the ability to handle new knowledge, the ability to find out what you need when you need it; or, as Ralph W. Tyler put it recently, to develop broad understandings rather than the specific details because the details change; key generalizations, however, assist in handling new situations. Finally we have the paradox that there must be mastery of tool subjects which requires individual attention, appraisal, drill, and the like; and at the same time, (as a result of reaction against conformity in our society) there must be developed creativity, inventiveness, problem-solving and all these freer kinds of behaviors that are suddenly thrust into the limelight.

I conclude from all this that teachers, faced with larger classes and heavier responsibilities, nevertheless are expected to accomplish tasks that actually require more individual attention to learners. They have to do better planning, using a wide variety of subject matter, in order to accommodate individual differences. They have to use a wide variety of learning activities in order to set the stage for problem solving, inventiveness and creativity. At the same time, they must keep abreast of new developments.

The situation would be quite hopeless in spite of the Defense Education Act and the new media if these merely increase the variety and extent of learning activities. The hope is that the new media may relieve the teacher of some of the instructional burden, freeing him for more attention to individuals and group activities. Teacher aids may also play a part in relieving teachers of clerical and routine duties.

I have come increasingly to the belief that television and radio can relieve some of the burden of sheer presentation. For a long time it has been said that television should do what the teacher cannot do. I think we should turn this around and say that the teacher should not do what television can do as well or better. In other words, onto television should be shifted the burden of sheer presentation so that the teacher may occupy himself with handling individual differences, group activities, student appraisal and counseling.

It seems clear, too, that films, filmstrips, recordings and additional printed materials can provide rich and varied experiences for meeting divergent needs of individuals or groups. They can be used flexibly with large or small groups or with individuals. And teaching machines, language laboratories and other programmed devices can take over some of the burden of practice, drill, and mastery of logical, sequential subject matter set out to be learned. Where it is quite clear that we know in advance the materials to be mastered, these automated devices and self-teaching mechanisms have much to offer in freeing the teacher.

Finally, I would point out that the textbook by itself is not sufficient. It is only one of many sources of educational experience. Learning requires a wealth of material and varied avenues of approach. Teachers themselves do not need to know everything that learners must be exposed to; this would be impossible. But they do need to know how to obtain instructional materials to meet the varied needs of the learning situation. The difficulty is that the amount and variety of these learning materials are increasing at an accelerated pace, just as knowledge itself is growing. Available figures are incomplete but, as pointed out in the Rufsvold-Guss proposal, the H. W. Wilson guides to 16mm films listed a total number of titles in 1953 of 11,000. In the next six years, however, 8,000 titles were added--a considerable increase. For filmstrips, the same source listed a total of 5,882 titles in 1954; in six years 5,197 were added. Or using the figures which were cited from the Britannica Book of the Year, there were produced in 1958, 7,200 educational films; in 1959, 8,440 were reported produced, an increase of 16.6 per cent. Apparently there is a constant increase in the amount of instructional material available to teachers.

There are also new types of materials appearing with the developing technology of communication. For example, kinescope recordings of television programs are becoming increasingly available. While many television programs of educational value are still fugitive, there is a growing tendency to make such programs available on film for later use. It is likely that videotapes will become another source of learning experiences in the not-too-distant future. Likewise, the field of teaching machines, as it is rapidly developing, involves the increase in available programming for such machines. If teachers are to use such machines effectively, they need to know where to obtain the particular programming for a particular need.

We should not overlook the increasing use of ~~amll~~ small units of motion pictures; not whole motion pictures of conventional length but film clips or portions. These are already being used effectively in television teaching but appear to have great value for teaching in the classroom itself. These short units deal with a particular operation, a single concept, a phase of a larger process.

What we have, then, is an accelerating increase in the number of content materials in recognized new media fields and also the addition of new fields. Thus the problem of keeping track of these new materials, the job of information retrieval in connection with the new educational media is beginning to swamp the existing cataloging agencies. Existing catalogs are incomplete in their listing, they duplicate each other, and expense is, I believe, becoming a major factor. This, by the way, is parallel to the situation in which research and scholarly libraries find themselves. They, too, are falling behind in their cataloging of accumulating material, and, they find themselves requiring an ever larger percentage of university budgets. This is bringing about the expedient of dividing up the job among the libraries rather than each library striving for completeness, with the consequent duplication of effort. The elimination of duplication, whether in university libraries or in the proposed catalog we are considering in this conference, would entail considerable savings and make it possible to keep abreast of the field for at least some time to come.

Finally, a word concerning the nature of bibliographic control. Teachers at all levels and communicators of all types need ready access to comprehensive information concerning content materials in all the media fields. With ever increasing knowledge, the teacher's role becomes that of selection of that content best calculated to contribute to the learning objectives which the teacher is seeking. This has many implications for the problem of bibliographic control. In the first place this implies that the selection must be from among all the appropriate media. It must be a cross-media approach. Why? Because the experience to be communicated is more important than the particular medium. At the same time, variety in use of media is more likely to take into account individual differences and also is more conducive to learning. Needed information should be readily accessible in one source for all the media (with the exception of printing only because this field represents a Herculean task in its own right, and because teachers have a kind of ready-made digest of some of the printed material in textbooks. That is to say, textbooks presumably represent a careful selection of materials for the particular subject and level.) Investigators Rufsvold and Guss identified 174 sources of new media information of which 78 are generally available. Not only is it impossible for teachers to consult such a large number of sources, but they have no assurance that these sources are complete.

In the second place selection is facilitated by ease of use. This suggests a single rather than a multiple approach for if teachers need consult only a single source they are much more likely to make use of newer media. Easy accessibility to complete information is a crucial factor in determining whether the newer media are used or not.

Those of us working with teachers in the use of radio and television are convinced that many teachers use broadcasts in preference to films, filmstrips and recordings not because the programs are superior but rather because once they learn of an appropriate series, it is easier to turn on a television set than it is to go through the many guides and try to select other materials, order them, arrange for the projector and go through other steps necessary before the children finally have the experience which the film provides. Anything that can be done to make the selection process easier is not only important but essential.

I would suggest, also, that the information to be disseminated should include appraisal. I recognize this is a controversial issue; but, from the standpoint of the teacher and the consumer, this seems to be essential. Teachers must have guidance to what is most likely to be effective in achieving their objectives. A careful and functional description will go a long way toward providing selection guidance among the mounting number of available materials, but it is not enough.

With the growing number of new media materials available in other countries, it seems only sensible to suggest that ultimately the bibliographic control should be world-wide to include not only materials produced elsewhere and distributed in the United States but also foreign materials which need to be imported.

In summary then we live in an unprecedented age of vast intellectual expansion. The sheer task of keeping up, of building upon what is known, is swamping our scholars and technicians who are increasingly specialized and yet must be aware of the complex relationships between their own fields and the fields of others. Information retrieval is necessarily becoming a high priority problem. Teachers at all levels are caught in a situation involving mounting public pressures for quality and efficiency; a bewildering increase in what must be taught and a shifting of emphasis in educational objectives at the same time that they face severe handicaps with more pupils; increased pupil insecurities; fewer well-qualified colleagues; and inadequate financial support. Teachers will increasingly have to avail themselves of the help afforded by technology in the form of the newer educational media. But these will not be used effectively unless they are known. Easy access is imperative. The cross-media approach in a comprehensive bibliographical system is an important step toward implementing the potential of the newer educational media, and thus helping to meet the growing crisis confronting all levels of education.

NEWER EDUCATIONAL MEDIA BIBLIOGRAPHICAL NEEDS OF ELEMENTARY AND SECONDARY SCHOOLS

W. Roger Zinn

Teachers of the elementary and secondary schools are the largest group among the ultimate consumers of audio-visual services. They work at the point of use. Behind them, and at times too far away, a galaxy of service units—from the producer to the delivery boy—strive with varying degrees of success to serve their needs.

It is about this service to teachers that I have been asked to comment. What I have to say must necessarily be limited to my experience in the local area I serve. This will admit of no claim on my part to represent general needs and general practices, though in many respects they will do just that.

Recently my graduate class in Audio-Visual Education, drawn from the area around Grand Rapids, responded to my questions about their needs for information about the newer teaching materials. Here are my questions and some of their answers:

1. What sources of information about the newer media do you now have?

   Some had local school catalogs and supplements.
   Some had catalogs of their private school film center.
   Some had catalogs of the city library, museum, and art gallery.
   Some had catalogs of the county schools audio-visual center.
   Some used the combined catalog of the University of Michigan and Michigan State University.
   Only a few knew about the *Educational Film Guide* and the *Filmstrip Guide*.
   A few had access to the *Educators Guide to Free Films* and *Educators Guide to Free Filmstrips*.
   Several had catalogs of sponsored films of business and industrial concerns.
   A few had catalogs of state departments of health, conservation, and of the state library.
   A few used producers' catalogs.
   Some had learned about materials at exhibits at educational conventions.

The responses revealed how little these rather good teachers knew about the variety of materials that they might be able to get for their classes.

2. What lists of materials do you have for your subject or grade level?

   Some teachers had developed lists of their own.
   Some found materials listed in curriculum guides.
   Some found materials listed in their textbooks.
   Some found lists in periodicals such as The Instructor, Grade Teacher, and their audio-visual supplements.
   Three students had used lists found in professional magazines in their subject areas, Industrial Arts Magazine, for example.
   Some had developed lists in their methods courses in college.

3. What would you wish to know about a material?

   In rapid succession—

   Title
   Grade level
   Where to get it
   How much (money)
   How soon

   Then, on reflection—

   Some questions on content and quality.

4. If a combined source of information on materials were developed, a book or a file, where should that source be placed?

   Should each teacher have a copy?
   Should each school have a copy?
   Should each school system have a copy and from it prepare a local catalog?

   The students thought that each school building should have a copy, and that
   Each teacher should have a list of the materials for his subject and grade level.

From the replies it was evident that only a few of the teachers had accurate and complete information readily available and that many came from schools where the occasional "free" film was all that they could have.

Now I know that I must give added emphasis to my unit on "Selection and Integration" later in the course!

What we in my own school system attempt to do will reveal our needs and may be indicative of what other teachers in other schools need. To help teachers learn about the materials we purchase for our own audio-visual center, we publish catalogs, mimeographed at present. Unfortunately, complete revisions are not frequent, supplements are. We have separate catalogs for the elementary grades, for the secondary grades, seven through junior college, and a small one for materials of restricted circulation and materials for staff use.

We do not have separate catalogs or separate sections in catalogs for the various media—motion pictures, filmstrips, phonorecords, phonotapes, slides, study prints, and models. We believe that separate catalogs tend to stress the media, rather than the instructional purpose the title should serve. We still have people who want "motion pictures only" and "in color." In our classified index we list title and grade level, but we do not indicate the medium. That information is supplied along with the description of the material in the alphabetical listing of all of our materials.

Our elementary schools get almost all of their materials from our own center. This makes our catalog almost the sole source of information about materials that the elementary teachers can get.

Curriculum committees, however, are supplied with all the information about materials that we can find. Purchases of additional materials always follow from curriculum revisions.

Because we own fewer titles for use in the secondary schools, we depend on rentals from our university film libraries. Catalogs are placed in school libraries, in school audio-visual offices, and copies are supplied to department heads. We use the classified index of our university catalogs as a pattern for the classified index of our own secondary school catalog.

Every secondary school library is supplied with the Educational Film Guide, the Filmstrip Guide, and supplements published by the H. W. Wilson Company. Each school has the Educators Guide to Free Films, and Educators Guide to Free Filmstrips.

In addition to these materials, the central audio-visual office maintains a file of EFLA cards, Audio-cards, and producers' catalogs.

The central office also serves as the distribution center for utilization guides supplied by producers. Teachers are urged to request and keep copies of guides for materials that they use repeatedly and for any materials that they have a special interest in.

The services just reviewed meet only minimum needs. Certainly, there are undiscovered needs and needs that we know about but cannot meet.

One way to increase teachers' interest in materials is to make it easy for them to get materials. Success in getting what is wanted may well lead to a search for more materials. We think that our procedure for requesting materials makes them easier to get. Every booking is a direct transaction between a teacher and the booking clerk. The teacher prepares the form, Request for a Material, for each item he wants. That form is sent by school mail or U.S. mail to the audio-visual center. The material is separately packaged and addressed to the teacher who uses it in his classes, then puts it in the return basket in the school library or office. There are no school lists to prepare or check and no stickers to attach to the shipping case. This simple routine is described only as an example of how important it is for us to remove annoyances that lessen interest in the newer materials.

How can our work in this conference help meet the bibliographic needs of the 1200 teachers in my school? The work within the school system must be done by a staff consisting of a secretary, a booking clerk, a film technician, a supervisor, and an available daily delivery service.

It seems to me that the best help would consist of information supplied for use in the preparation of catalogs, grade level and subject area lists, and lists of materials for curriculum builders. The proposed national catalog service for the newer media could help in these ways:

1. Make available a master catalog with classified indexes that could be used in the preparation of catalogs of locally owned materials.

2. Make available stencils and offset lists for catalogs.

3. Make available catalog cards for purchase by the local center.

4. Supply information about new materials as soon as they are released, so local supplements can reach teachers promptly.

Most certainly, what I have been presenting is only a partial picture of the bibliographic needs of teachers in our elementary and secondary schools. It is not offered as a general picture. It may not be a real clear picture of the needs in this one particular locality. I can predict that a different treatment of the picture I now see is bound to result from the clarification of the issues in the day just ahead of us. I offer my present picture as a target. Shoot! I realize what happens to targets if they are worth the ammunition.

NEWER EDUCATIONAL MEDIA BIBLIOGRAPHICAL NEEDS OF STATE DEPARTMENTS OF EDUCATION

W. H. Durr

The type and kinds of information needed by State Departments of Education is determined by the aims and purposes of the department. These aims and purposes are to provide to schools under their jurisdiction:

1. Leadership
2. Direction
3. Assistance

Thus the needs become identified with those of the schools. These include the need for instructional materials that will enable the schools to more effectively provide a program of instruction for those whom they have been established to serve.

> Materials exist and more are being added all the time.
> The need and desire for materials also exists.
> And yet the need is not being met.
> Instruction is starving for materials in midst of comparative abundance. Why?
> One reason is failure to provide appropriate, selective, organized information to the right person at the right time.

Of course, information is available. We all have it, such as it is, and are continually getting more of it all the time. We have catalogs, booklets, textbook correlations, special listings, letters, folders, leaflets, cards, and magazines. Every mail brings in more. You glance at it or look it over, you file it, or stack it, or put it in piles that you mean to look over more carefully when you have more time. Much of it makes a quick trip to the circular file. You make tentative plans to organize it in a more usable form at some later date. But, perhaps, this is not done because you can't find time, or lack personnel, or facilities.

This flow of indiscriminate information does not necessarily stop with us, it goes on around us, by us, and past us to teachers. And some of it they find helpful. However, I do not need to tell you that teachers are busy people. If we have found it difficult to organize and systematize the information which we have and are continually receiving, what are we to expect of them whose time is filled meeting and attempting to provide instruction to five or six classes a day in frequently as many different subject areas, to maintaining and running a home, to participating in community affairs, and who, research shows, spend on an average of less than one hour per day in lesson planning and preparation for all the different subjects and classes they teach. Do they, or will they spend the time necessary to look for the needle in the haystack of information on materials, for that particular film, or filmstrip, or recording that they will need next month to effectively present the lesson they will be attempting to teach at that time? The answer is fairly obvious.

We can't ask or expect teachers to take time to play Treasure Hunt in their efforts to locate appropriate materials and yet, that is what they are being forced to do.

Let me illustrate?

Imagine you are a teacher of health in a secondary school and you are attempting to locate films that would be helpful to you in your health classes.

I did this myself just a few days ago just so I could, from my own experience, go through and analyze the teacher's task in such a situation. It is an exercise that I can recommend to you. In doing it, take any subject of the curriculum at either the elementary or high school level and see for yourself how it works out. It is quite revealing.

Well, to return to the suggested role of the health teacher. Let us go through it.

Treasure Hunt

Our problem—To locate films for use in health classes in public high schools.
Our source of information—A nationally recognized guide to educational films.
Our approach—To look for the heading "Health" in the Subject Index.
First Step—By turning the pages to the Health subjects, we come to the following:

Health - See Hygiene (page 395)
Health, Public - See Public Health (page 418)
Health, Education - See School Hygiene (page 423)
Health of Children - See Children (page 373)

These are our first clues. Let's start running them down.

Second Step

Health - See Hygiene

(3 pages over)

Hygiene

*Alexander Learns Good Health (el-jh)
**Fred Bauer Waits (sh-c-ad)
Good Health Practices (p-el)
Johnny and Mr. Do Right (p)

*Learning About Your Nose (el-jh)
**Live Like a Champion (p-el-jh-sh-c-a)
Running for Sheriff (p-el)
*Your Cleanliness (el-jh)
*Your Clothing (el-jh)
Your Health at Home (el)
Your Health: Disease and Its Control (el)
See Also - Beauty, personal; Clothing and Dress; Diet; Food; Mental Hygiene; Occupational Diseases and Hygiene; Physical Education and training; School Hygiene; Sleep

Turning to the heading Hygiene, as I have indicated, we find under the heading a listing of eleven film titles as given. The asterisks and the grade levels, given in parentheses are my own addition. Below the listing of films we find, as indicated by the "See Also", references to other topics or subjects which may list additional films relating to our subject.

In checking through this list by actually looking up and reading the descriptions, we find only six out of the eleven films listed that appear at all suitable for high school use (those marked by asterisks). And only two that are actually marked for senior high school (those marked with double asterisks). We have also gotten leads on nine other topics or categories. These six films are potentially good materials for our course. However, hygiene is certainly a very limited aspect of health education. Let's go back and follow our next lead.

Third Step

Health, Public - See Public Health
(25 pages ahead)

Public Health

**Broken Appointment (sh-c-ad)
**Community Health and You (sh-c-ad)
**?Doctor In a Jeep (p-el-jh-sh-c-ad) - Near East
**Health For A City (sh-c-ad)
It's Up To You (c-ad) - (specialized on X-ray survey)
**State of Virginia's Health (sh-c-ad)
State of Your Health (c-ad)
**Your County Health Department (jh-sh-c-ad)
Your Health in the Community (el)
See Also - Contagion and contagious diseases; Hospitals; Milk Supply; Noise; Occupational Diseases and Hygiene; Refuse and Refuse disposal; School Hygiene; Water; Water Supply

By looking through from the H's to the P's, we come to our next lead of Public Health. Again, the asterisks and the parentheses are mine, determined on the basis of my reading of the descriptive information on each film given in the main section of the catalog where the films are listed alphabetically by title.

In checking the information on this list, we find we didn't do too badly. Six out of nine is pretty fair although one is a question mark. We also have leads on nine categories which we can investigate further. Well, let's go back and start again.

Fourth Step

Health Education - See school hygiene
(30 pages ahead)

School Hygiene

School That Went to Town (c-ad)
Your Health at School (el)

We struck out on this one - no appropriate films and no additional leads. Well, let's go back and pick up Health of Children, our final category under the subject "Health".

Fifth Step

Health of Children - See Children
(20 pages back)

Children

Caring For Your Toys (el)
Children at Work and Play (p-el-jh-ad)
Demons and Little Men (sh-c-ad)
*Helping In The Care of Younger Children (sh) (Safety)
Holiday From Rules (p-el)
*How to Raise a Boy (jh-sh-c-ad) (Mental Health)
Johnny and Mr. Do Right (p-el)
Your Children Walking (c-ad)
See Also - Adoption; Baby Sitters; Character Education; Child Study; Day Nurseries; Education; Education of Children; Infants; Play; School Hygiene

We haven't done too well here. Only two out of eight have health implications which are suitable for use with high school classes. Neither do we get any leads for health from our "See Alsos" other than School Hygiene which has already proven a dud.

Now let's stop and see what we have found so far. We have been given a list of 30 films out of which 14 have some application to high school health instruction. These relate to the areas of hygiene, public or community health, and mental health which are certainly important in health instruction. Let us note, however, that none of the films relates to such important phases of health instruction as the various body organs or systems and their functioning. I am referring to such as the digestive, respiratory, circulatory, nervous, and excretory systems and organs. Further, a check through the 26 "See Alsos" which were given turn up no films having to do with these topics. Certainly, here is an important area that has been omitted but we are certain some films must exist. In trying to think through this, we may think of the old term "physiology" and check it through. If we do this, we find under

Physiology
How Our Bodies Fight Disease
Human Machine
Learning About Our Bodies
See Also - Blood; Bones; Cells; Digestion; Growth; Heart; Nervous System; Reproduction; Senses and Sensation

This opens up nine additional leads with their subsequent "See Alsos" for us to pursue. This I also did and I found a lot of excellent material. However, even after I had run them through, I discovered, quite by accident, that no reference was made in any of these to teeth or their care although we might have expected it as at least a cross reference under "Digestion".

I don't feel there is any need to belabor further the task that faces teachers in their efforts to locate appropriate and suitable materials. Nor should we be surprised at the fact that many fall back on the textbook and lecture method as being less demanding of time and energy.

Therefore, I would say that our first and primary need in schools and state departments is for a system of classification based on commonly accepted curriculum approaches to subject matter areas.

I do not mean to infer from this that there is no need for topical or unit listings of material or for efficient systems of cross-referencing. I do wish to emphasize, however, that for school purposes the subject matter area approach should provide the basic structure for cataloguing and that all additions of topical or unit listings should be so arranged and cross-referenced as to support rather than detract from this basic design.

After the materials are thus sorted and placed in the areas which are familiar to those concerned with instruction, following are some of the things which they would like to know about these materials:

(1) Length or Running Time. This is important to the teacher so that she can plan her time allotment for the period in which the material is to be used. Knowing the running time will permit her to plan definitely as to the amount of time that she will have for preparation and for follow-up which in turn may affect her plans as to the use of supplementary materials that she can schedule in the pre-showing and after showing portion of the class period.

(2) Producer. Producers, like authors, tend to develop a style and treatment of subject matter uniquely their own. A knowledge of the producer gives a clue, to those familiar with their materials, as to the type of treatment which they might expect.

(3) Year of Production. This is expecially important in certain subject areas, such as science, where advancements are made so rapidly that information soon becomes outdated. For example, a film dealing with missiles and space satellites, within a few months, has limited value other than for historical purposes. Even changes in style and dress tend to limit the effectiveness of instructional materials for many purposes.

(4) Grade Level. The importance of this is self-evident.

(5) Subject Area Correlation. As I have indicated in the foregoing, it is not enough to know that the film relates to health instruction. The specific area or aspect of health is also important. Further, knowledge of the fact that a film relating to health also has historical or sociological implications and can be used to advantage in those subject areas is also desirable.

(6) Content Description. This should briefly summarize in a factual manner the story, ideas, or concepts set forth in the film.

(7) Nature of Treatment. (Animation, time lapse, slow motion, etc.) A knowledge of the use of these treatments is important in the selection of many films; such as, for example, many of those dealing with science, biology, athletics, industrial processes and the like.

(8) Color or Black and White. This is an important factor to consider in determining the selection of films dealing with growth of flowers, the use of maps and map symbols, the study of costumes of various nationalities, and others where the use of color is essential to the purpose of communication.

(9) Availability (can it be replaced in part or whole). This is most important to those responsible in selecting films for purchase. For example, it is most disconcerting to find that replacement footage is no longer obtainable for a subject that is very popular with your teachers.

(10) Cost. While this item may not be of so much concern to the general classroom teachers, it certainly has importance to the person who handles the budget and perhaps, it is also good even for teachers to be aware of the factor of cost.

(11) T.V. Availability. This is becoming a more important item with the increased use of educational television by schools.

(12) Primary Design or Purpose. Perhaps, I have not used the best words to describe what I mean here but it is important to teachers in selection of films that they know whether it presents a motivational or introductory point of view, or whether it sticks to a factual presentation of information or whether it was designed as a review or summarization material, or whether it is prepared as an open end or discussional type of film that does not attempt to give answers but presents the problem and leaves the solution up to the judgement of the audience. We are getting a number of such films now in the area of guidance and human relations.

These are illustrative of a few of the things that teachers would like to know about the new instructional media and thus they become bibliographical needs of State Departments of Education.

NEWER EDUCATIONAL MEDIA BIBLIOGRAPHIC NEEDS OF COLLEGES AND UNIVERSITIES

Charles F. Schuller

In any field of endeavor, the necessity exists for a system of classifying and filing information so that it can be found readily when needed. In an age of print, this function in higher education came to be systemmatized in college and university libraries. The vast volume of books, pamphlets, encyclopaedias, manuals and other printed materials led of necessity, to increasingly complex systems of classification and to a profession of librarianship, the importance of which is universally recognized in college and university work. The library on any campus has thus come to be a significant measure of the quality of an institution's educational program. For on it must necessarily depend the study and research programs carried on in that institution.

The use of audio-visual materials in the curriculum and instructional methods of higher institutions of learning was slow in developing for a number of reasons, but during the past fifteen years progress has been rapid. On many campuses across the country, audio-visual and instructional materials centers are having a difficult time in meeting the increasing demands of academic departments. And those difficulties are just beginning. For, as presidents, deans, and faculties come face to face with the inevitable changes that must take place in higher education if these institutions are to continue to perform their historic functions in our society, the move toward integrated use of the newer media of communications may well assume the proportions of a stampede.

Visual on College Age Data

Even if funds were to be made available to accommodate the rapidly rising enrollments in colleges and universities throughout the United States with the necessary classrooms, laboratories, and staffs, the Ph.D.'s have not been born yet who would be required to maintain university instructional methods in present modes five and ten years hence. Changes in higher education methods would have come eventually in any case. But under the conditions now facing higher institutions, change, and rapid change, is inevitable.

Under these circumstances, audio-visual staffs in our higher institutions may soon find themselves in the somewhat ironical position of the salesman who has sold too well and whose company is unable to fill the demands he has helped to create. Not the least of these demands in the case of audio-visual centers will be for the location and procurement of materials of an unbelievable variety and number.

Academic Program Needs

In our own institution, there are 96 academic departments of study. While this is a considerable number, it is not unusual among larger institutions. In these departments are about 1500 faculty members, teaching a total of over 3000 different courses.

If even as small a proportion as ten percent of these faculty members were suddenly to descend upon us for help in locating and securing appropriate films, kinescopes, videotapes, recordings, tapes, learning machine programs, or slides, we would be hopelessly swamped. For where information exists at all about available materials for specific higher education needs, it is scattered among over 2500 professional and technical journals and over 250 catalogs, pamphlets, manuals, and other special listings. And many of the materials which we would need may well have been prepared at other institutions for their own use and are listed nowhere else. This is the general picture facing colleges and universities today in contemplating a thorough-going use of the newer media of communication in instruction.

Teacher Education Needs

In more specific terms, colleges and universities have several interests in which strong need exists for better information on available audio-visual materials. The first of these needs has been suggested above in the general academic program. Another major function of colleges and universities is the preparation of teachers. While it is still true that it is possible for teacher candidates to be graduated from many institutions with no more than a cursory acquaintance with the newer media of communications as they relate to education, this situation can be expected to improve rapidly during the next few years.

One essential element in developing the professional competence of teachers with respect to the newer media lies in their being taught with these materials and methods in academic courses of study. More specific experience with audio-visual materials is necessary in educational methods classes and perhaps in courses on the nature and uses of audio-visual materials. In any case, it is highly important for the prospective teacher to become familiar with representative teaching materials of all kinds which will be used when they go out to teach. The many thousands of teachers now in service who are continuing their professional preparation in inservice courses have a similar and often more recognized need. This means that a good university teacher education program must of necessity have an excellent library of audio-visual materials at the elementary and secondary levels if it is to do a creditable job of professional preparation. While the procurement of these materials is somewhat easier than those described for university course needs, the situation facing the department wishing to acquire them is still chaotic, as indicated by my colleagues on this section of the program.

Service to Schools

A major function of state colleges and universities, (but by no means limited to them), is the provision of services of various kinds in the states which support them. Prominent among these services are consulting and materials services to schools, to adult education programs, and other governmental agencies. Most states, for example, have universities with substantial film libraries for use in the elementary and secondary schools. Many such libraries likewise include specialized film collections, such as the Penn State's Psychological Cinema Register, New York University's and Columbia's teacher education collections, and Michigan State's Highway Traffic Safety film library. There is a real need for more such specialized collections. But as anyone who has participated in the development of such collections knows, simply finding out what exists is no small task at the present time.

The general picture, then, is that colleges and universities have a definite need for better sources of information than now exists on available audio-visual materials. These materials are needed in the quest for solutions to critical problems facing higher education even in its traditional instructional programs. To this might be added the pressing needs for more adequate reporting and dissemination of research findings through use of the newer media as exemplified in some efforts of the National Project in Agricultural Communications at Michigan State, and the former Physical Science Committee at MIT, among others. Finally the service and teacher education functions of colleges and universities require that they have ready access to much of the materials needed in elementary, secondary, and adult education programs throughout the nation.

In light of the demands facing our society and our world today, there appears to be little disagreement among governmental leaders here or abroad with the stronger role that education at all levels must play in future developments. In improving their education endeavors, however, the schools and colleges have a basic need for much better systems than now exist of identifying and locating pertinent audio-visual materials. In fact, it would not be too much to say that the establishment of an efficient, thorough, and rapid directory service in the area of the newer media of communication is one of the critical needs of education at all levels today.

THE PUBLIC LIBRARY AND THE NEWER EDUCATIONAL MEDIA

Irving Lieberman

From the earliest audio-visual activities of the American Library Association, there have been efforts to bring the public library and films together. In the first recorded discussions it was a relationship with the Hollywood film product and books that received emphasis. Later the case for distribution—for 16mm film service in public libraries—was made by John Grierson and then reiterated by Adam in his study, *Motion Pictures in Adult Education.*[1] He cautioned against attempting this service, however, without additional financial assistance and without changing the library's traditionally passive role as custodian.

The Status of Educational Motion Pictures and Libraries in 1940. The first significant and still valuable library study was done by McDonald[2] under a grant from the Rockefeller Foundation received by the American Library Association in April, 1940. This was a landmark in the development of film service in the public library. It gave the direction and sufficient background information in its detailed appendices so that any library that wanted to begin—could begin. The author makes note of the fact that the education and experience of librarians in the usual library processes can be carried over into films and other audio-visual materials.

The American Library Association's Film Advisory Service. In the war years that followed the publication of the McDonald study there was increased activity and growth of audio-visual programs in public libraries. This culminated in the preparation of a proposal for a Film Advisory Service at the American Library Association. In June, 1947, a grant to support such a service was made by the Carnegie Corporation. This was to be a demonstration that public libraries as community agencies of education can contribute substantially to the local availability of films as well as the more traditionally accepted educational materials—books. The work of Mrs. Patricia Blair Cory, the Film Advisor, over the four-year period of the grant divided itself into two distinct parts. In the first two years, she worked largely with individual libraries on the development of their programs, advising on quarters, personnel, budget, minimum equipment, and what films to buy first. In the second two years, she helped bring into existence two successful demonstrations of film circuits which influenced American librarians, and other circuits or cooperative arrangements were organized elsewhere in the country. These later activities helped to achieve the broader financial base necessary to finance a special service such as films and yet left the local library free to plan its own programs and utilization.

During the four-year period of the project there were ten special film workshops for librarians in all parts of the country. At these workshops experiences were exchanged and critical evaluation and selection of film material were emphasized. At this time, too, the special gathering of film statistics was begun and has continued until 1959. For example, during the month of November, 1953, 33,358 16mm films were shown to 2,989,124 people through public libraries. During 1958, 721,158 16mm films were shown to 36,075,365 people in the twelve-month period.

The Development of the Information Film and Its Relationship to Public Libraries in 1949. A comprehensive study of the public library was instituted during the lifetime of the ALA Film Advisory Service Project. One of the Public Library Inquiry's special reports The Information Film[3] has added considerably to our knowledge regarding the public library and 16mm film. After a careful examination of the 16mm film field, Waldron, the author reports that the public library has unique advantages as a center for film circulation to adults.

The book has two substantial chapters that have been welcomed by librarians with specific problems in circulating 16mm film. In one chapter, entitled: "Film Circulation in Eight Libraries," the author describes the present operation with a look back at the initiation of the service and a look forward to the potentiality of the program in eight public libraries of varying size, population composition and geographical location. In the other chapter, entitled: "Library Film Problems," she highlights the problems and activities of most concern to librarians and draws on her knowledge and experience and that of her interviewees for possible solutions. In her conclusion, she indicates that the use of film for education and culture is a special challenge to public libraries.

The Thirtieth Birthday of 16mm Film and a Look Ahead. As a good follow-up to Waldron's book, on the occasion of the thirtieth anniversary of 16 mm film, 1953, a symposium was published summarizing the film's past and anticipating its future.[4] This overview has been written by experienced students of the film. The reporters "measure distances objectively and give us both a sense of direction and strength for traveling." One such reporter is Grace T. Stevenson, who describes the current 16mm film scene with regard to public libraries.

Mrs. Stevenson makes a case for the growth of film service in public libraries as a logical development of the well established adult education services in libraries. From her recent experience as adult education librarian at the Seattle Public Library (she is now Deputy Executive Director of the ALA), she describes graphically the development of library interest in film. She reports the growth of the program indicating the successes as well as the failures.

Much that was first forecast in the McDonald study on the development of this field, and later discussed and demonstrated by example in the Waldron report, has come to pass. More libraries, either through their individual taxing jurisdictions and areas of service or having joined together with other libraries in film circuits, are providing 16mm film materials for their patrons. This matter of participating in a cooperative agency is described in detail in a report made by Patricia B. Cory and Violet F. Myer.[5] They describe actual arrangements as found in their survey of film administrative agencies and circuit-member libraries in the United States. This report also includes sample budgets and contracts. The way is clearly marked for the how-to-do it of providing film service even for libraries with limited budgets.

As film utilization has increased considerable effort has been expended in achieving the best in selection aids for library adult education purposes. Not too long ago only descriptions published by the producers and distributors of 16mm film or brief annotations in the trade journals or bibliographies were available. In 1955, the American Library Association published its selective list, *Films for Public Libraries.*[6] This is a balanced list of critically annotated films in all fields with no attempt to specialization. This was followed by a supplement in 1957 and, since that time there have been specific reviews of recommended films periodically in the issues of *The Booklist* and *Subscription Books Bulletin.* This type of selection aid, where preview facilities are unavailable, has improved the situation for effective utilization of 16mm film. While some attention has been given to the use of such materials with children and young people, the major emphasis throughout this program during the past twenty years has been to seek films that could be used with adults in informal adult education as well as program material for autonomous groups.

The development of the 16mm film program in the public library may be described in three stages. First, it may be simply an information service for library patrons in connection with programs for the use of an individual or an organization. Second, as the library's own program, films may be obtained with or without rental to be used for evening programs based on subjects requested by citizens, community need, or general cultural or intellectual interest. Third, the establishment of a loan or reference collection for use by the community; this involves more than the mere lending of films because an essential quality of this service is the advising and program planning for the use of such materials. Since this stage requires the largest outlay of funds, the recommendation expressed earlier for cooperative audio-visual services needs to be examined.

Recordings in the Public Library. Several decades ago, librarians became aware of the growing enthusiasm for phonograph recordings of good music. Realizing that recordings could be an important factor in musical study and appreciation, a number of the larger institutions began to acquire and make available a selection of the world's great music on discs. At first, records were kept in the library building for the use of individual readers or groups. Later libraries began lending them like books, either free of charge or for a nominal rental fee. From these small beginnings, library servicing of recorded music has grown into a major activity with well-balanced collections numbering thousands of items in large libraries. Some smaller libraries, have developed similar collections and services within the limitations of space, staff and budget.

It is only during the past dozen years that poetry, drama, ballads, folksongs and related materials recorded on discs have come into general popularity and use. At present a number of firms and noncommercial agencies provide a wide selection of nonmusical discs with the greatest variety of both content and performing artists. Most numerous are the dramatic recordings ranging from Shakespeare to recent Broadway hits. Almost equal to drama in number are the poetry recordings which include great poets of the past presented by professional readers and a growing number of recordings by living poets reading their own work. Language study recordings are also available. Libraries were somewhat slower in becoming aware of the potentialities of nonmusical records but a few pioneer collections do go back to the middle thirties.

Many of the services employing recordings relate equally to the musical and nonmusical fields. First of all, there is the individual language, music, poetry or drama patron who borrows library records for home use or listens to them in a library listening room or on reading room machines employing earphones. This individual activity, contributing to learning or enjoyment, probably accounts for by far the greater proportion of library use of recordings. In recent years, however, there has been increasing emphasis upon group use either for educational or recreational purposes. Library music recordings are used in every type of educational or community situation where recorded music fills the need. Informal gatherings to listen to fine recorded music, drama or poetry, have become popular as a quiet evening's entertainment among people of artistic interests and taste. Libraries help educational institutions, community agencies and informal groups to prepare programs which consist wholly or in part of library recordings. Many teachers and group leaders feel that poetry presented by a distinguished actor or experienced professional reader is far more effective than when read by amateurs. Drama students and little-theatre groups can profit by listening to the performances of outstanding theatre companies on records. Of more immediate practical assistance are the lending collections of theatrical sound effects and recorded sounds in nature which some libraries service to community theatre groups.

Television and the Public Library. The newest of the audio-visual media is television. For more than a decade libraries have been examining the potential and use of commercial and noncommercial television, and each succeeding year has indicated more effectiveness. This development was climaxed in 1958 with a two-day institute just prior to the San Francisco conference of the American Library Association on the use of television in library adult education. The premise on which the institute was based was, "that the intelligent use of television by the librarian has larger goals than the immediate benefits of publicizing and promoting the library in that community; that it can, additionally, add still another dimension to many areas of library adult education programming; and thus can enrich the library's total adult educational effort in the community."

The role of the library with television is fourfold: (1) the library may provide resource materials to assist television producers, writers, and other individuals working in the field of television; (2) the library may occasionally initiate a program of its own as a single performance or as a weekly series; (3) the library may become a part of someone else's show; (4) the library may become the repository of kinescopes (recorded television programs), magnetic tapes, etc. of television productions for historical and archival purposes.

Libraries have recognized the complementary role of noncommercial to commercial television as being somewhat akin to the value theory as contrasted with the demand theory of book selection. It has been emphatically stated that culture in a democracy is a two-way street. If it is bad for the majority not to recognize minority tastes, it is just as bad for the minority not to recognize majority preferences. For this reason it is necessary to have the programs planned by commercial television for the large audience but at the same time to provide the telecourses and special information programs to meet local community needs and desires on the noncommercial channels.

With requests for assistance from libraries everywhere the Public Libraries Division of the American Library Association prepared a report titled: TV: How Public Libraries Use It.[7] Here is tablulated and organized information covering the experience with educational programs for television as evidenced in surveys conducted by committees of that association. One of the more valuable sections of this publication is the comprehensive listing of television program ideas. Considerably more than children's story hours and book-based or book-oriented discussions are suggested and described briefly. This is the starting point for most library television activities.

Audio-Visual Materials and Public Library Services. The Bench-Mark Survey of library adult education activities in 1953 by Helen L. Smith[8] gave for the first time, on a sampling basis, the quantity of newer media methods and techniques employed in public libraries in the United States. Four years later as part of a regional study of library needs and resources in the Pacific-Northwest, Mary R. Pamment[9] found that the audio-visual resources in libraries in that region of the United States were four times greater in 1957, notably in the area of 16mm film and 16mm film equipment. There was also a clear indication that the number and type of adult education services was in direct relationship to the size of the library, its available resources, and the amount of staff time available for such services. Thus it was found that the libraries which served the largest population groups were able to do the most effective job with adult education activities.

In all probability the single national stimulant for the greater utilization of audio-visual materials and techniques in libraries has been the series of grants to the American Library Association by the Fund for Adult Education. C. H. Hewitt[10] has prepared Grant Evaluation Study which lists the six projects as follows: American Heritage, 1951-1955; Survey of Adult Education in Public Libraries, 1952-1953; Adult Education Subgrants, 1953-1955; Allerton Park Conference on Training Needs for Librarians Doing Adult Education Work, 1954, Library-

Community Project, 1955-1959, and for the operation of the Office for Adult Education, 1953-1961. One of the purposes of the evaluation study was to determine in what ways the quality of adult education programs in libraries has improved, and skills have increased, and to predict what future progress may result from the grant activities.

The fiscal 1959 statistical report published by the Office of Education indicates an expenditure for audio-visual materials of $435,696 by public library systems in cities with populations of 100,000 or more and $135,360 by public library systems in cities with populations of 50,000 to 99,999.

Public Library Standards. In 1956 the ALA approved and published its current public library standards.[11] The recommendation is that:

> The collection of the public library is inclusive and contains whatever forms of materials contribute to the purposes of the library.
>
> Selection of materials for the library should be determined by usefulness and should not be limited by format.
>
> Nonbook materials should be an integral part of the collection and, within limits of availability and usefulness, should be provided to the same degree of range and inclusiveness as books.
>
> Nonbook materials may be acquired to supplement book resources and to substitute for books when such are not available on a given topic. Sometimes new groups can be reached by going beyond the printed page bound in hard covers. Nonbook resources include not only slides, films, and recordings, but also printed material issued as magazines and reports by organizations and governments, printed material in the form of maps and music scores, and microfilm and microprint. Joint acquisition among several libraries of the more expensive forms of nonbook materials is recommended as a means of increasing availability of these resources.
>
> The quantitative standards are:

Two hundred fifty films should be in collection of a library system, with at least 25 added per year—1500 long-playing discs or recordings (not including duplicates) should be held, with 300 new records purchased annually. In addition, pamphlets, maps, filmstrips, slides, and other materials properly constitute part of the collection; data on which to base standards for such materials were not available.

Conclusion. The use of audio-visual materials in public libraries is a logical development of the well established library adult education services. Such development has occurred as part of the library's own program service, or as information service for, or as a loan or reference collection to be used by, community groups and adult education agencies. In this way the public library can most readily realize its potential role as the communications center for its constituency.

Moreover, the joint and separate use of printed and audio-visual materials with children and young people should also be noted. Recorded story hours and film and filmstrip programs for children of all ages are a natural outgrowth of successful programming on radio and television. Filmbased discussion activities have developed by the score. These have found a natural place in the library's own programs for individual as well as autonomous groups in the community.

It is essential that there be complete understanding on the part of the whole public library staff of the potential value in learning of all materials of communication. The greatest care must be exercised both in their selection and in their utilization. The success or failure of these materials is a shared responsibility which reaches its greatest effectiveness under complete integration.

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NEWER EDUCATIONAL MEDIA BIBLIOGRAPHICAL NEEDS OF A SPECIAL SUBJECT FIELD AS REPRESENTED BY MODERN FOREIGN LANGUAGE TEACHERS

A. Bruce Gaarder

What I am requested to do here is far beyond the scope of one person and fifteen minutes.

The stated purpose of establishing bibliographic control of the newer educational media is to promote the fullest use of the best possible instructional material consistent with the best learning theories and practices. Therefore, my assumption in this paper is that the concern of the conference itself does not end with bibliographic control, but that it embraces also the desiderata that the newer media be more widely and effectively used and that proper newer media materials be available for such use.

First a word regarding the scope of any presentation whatsoever of bibliographic data: whether it be the national catalog, the subject and grade level guide or the bulletin you have described in the proposal, any presentation which aspires to be maximally useful in modern foreign language work should include the film, the filmstrip, the slide, the phonodisc and particularly the phonotape, and it should include a critical evaluation of each item. Such are the state and stage of our art that anything short of this will be less than half a loaf. Since no foreign language teacher is likely to disagree about this, I shall not discuss the point further.

There is, however, a wide area of disagreement or misunderstanding, not so much among foreign language teachers as between these teachers and those who try so hard to supply us with the best possible audio-visual aids. What I shall say is almost as pertinent to the audio aid as to the visual one, but for the sake of brevity I shall speak only of the latter for example.

From the common sense point of view of the uninitiated, the mystery of a foreign language seems clearly to be the mystery of those unintelligible words and what they signify. And it follows that any device that would unlock the meanings of those words would help solve and dispel the mystery. The final step in this line of reasoning is that pictures of things and situations accompanying the spoken names of those things and situations should help materially in learning a foreign language.

This reasoning contains some truth. But it also contains enough error to have nullified in large measure the contribution of the visual media to the all-important beginning years of foreign language teaching.

An understanding of this situation seems directly pertinent to the problem of bibliographic control of the newer educational media offered in aid to the foreign language teacher, if we accept the purpose of establishing such control to be the promotion of the fullest use of the best possible instructional material consistent with the best learning theories and practices. Therefore, a few more words seem to be in order to clarify the commonly-held fallacy that the foreign language mystery is the sum of the mysterious meanings of its words.

A better statement of the nature of language (for the present context) is that it is a system of systems-in-action with all of the systems continuously manifest fragmentarily in words. The three systems are the sound (phonology), the form (morphology), and the order (syntax). We can well make a limited analogy here with one of the new calculating machines, the electronic brains we hear so much about. These machines can be said to comprise at least four inter-acting systems: the logical, the mathematical, the electronic and the mechanical. Films or filmstrips of the bulbs flashing and the wheels going around, with or without the nomenclature, would not help us very much to function as Univacs.

Let me give a better example from language itself. In English we say *John hit Mary*, and the order of the words tells us unmistakably which *one did it and* which one got it. But in Spanish one could say, in effect, *John Mary hit*, *Mary John hit*, *Mary hit John*, *Hit John Mary*, or *Hit Mary John*, *and it would all mean that John hit Mary. Now it is plain to see that* the base problem is not to show pictures to identify John and Mary or show the villainous action. The principal task is to teach the *habit* of using certain mysterious clues that are so different *from English*, and we have not learned a way to present these clues visually. In fact, with one exception known to me, we have not realized the nature of the problem.

I wish to make two points here. The first is that until the misconception is recognized as such, the great potential contribution of the new visual media to foreign language teaching will never be fully realized. The second point deals directly with bibliographic control: from the foreign language teacher's viewpoint, no control system will be maximally useful unless it incorporates a system for describing and evaluating each item in terms consistent with the nature of language and language learning.

It is important to make here a distinction between the first 350 hours of foreign language study and the advanced study thereafter. It is during those beginning courses that the film and filmstrip are not meeting the challenge of today's foreign language teaching, and largely for the reason I have stated. Listen to the testimony of two of the nation's foremost specialists, Drs. George Borglum of Wayne State University and Lavelle Rosselot of Otterbein College. Dr. Borglum says "....courses in beginning language based on the integration of visual and linguistic materials which can be obtained with a purchase order are very few." Then he recognizes three such courses—all experimental—and concludes: "It is not my intention to slight any program, but I think that after these three, the visual element falls off markedly."* Professor Rosselot is no less forthright. She says: "Most language films are at present merely an interesting interlude for intermediate students, with the educational value lying chiefly in the interest-getting power. The movie as a teaching technique in foreign language is generally at the same stage of pedagogic development as the record was at the beginning of the audio phase, the birth of the language laboratory."**

Films, filmstrips and slides have not contributed significantly to classroom learning of foreign languages during the first 350 hours of study because their contribution has been conceived almost entirely as cultural enrichment and the illustration of meaning—the meaning of words and situations—when what is needed primarily is the elucidation of language structure.

Paradoxically, once the three systems have been brought under the students' control the need changes, and thereafter the chief problem is indeed vocabulary, the swift, efficient extension of the students' vocabulary. At this point it seems likely that the film, specifically designed to provide the pictorial illustration of words and situations for the specific purpose of building vocabulary, could complete the revolution now under way in FL teaching. Yet, so far as I know, no films have been produced specifically to exploit this extraordinary possibility.

How can a bibliographic control system best contribute to the clarification of the misconception so that the newer media will be maximally useful and used? In my opinion, this can be done by a judicious use of the evaluation that must accompany every title. Any evaluation is necessarily based on criteria. Criteria are, in effect, specifications. All that I have said is prefatory to this strong recommendation: select descriptive and evaluative criteria strictly in terms of the nature of language and language learning. Describe and evaluate each item in such a way that the teacher can see which offerings have more than routine-breaking entertainment or "enrichment" value. A great many items will be found wanting, but the result will be a powerful feed-back effect on the teacher. She will begin to think of the film as a teaching device. Most of all, a proper, rigorous set of criteria might help to release and guide the creative talent of the film makers. I am confident that that talent could contribute in undreamed-of ways to foreign language teaching if the film makers came to understand the nature of language and language learning.

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* Borglum, George, "What is the Audio-Visual Score Now?". In International Journal of American Linguistics, Part II, Vol. 26, No. 4, October, 1960, p. 199.

** Rosselot, Lavelle, "The Use of Visual Materials in the Teaching of French", ibid., p. 195.

NEWER EDUCATIONAL MEDIA BIBLIOGRAPHIC NEEDS OF A SPECIAL SUBJECT FIELD AS REPRESENTED BY SCIENCE TEACHERS*

Richard Paulson

Going from the most general considerations to the somewhat less but still quite general to the most specific makes consideration of the more specific ones become almost increasingly super-erogatory. All the things that have been said this afternoon about the fundamental changes and developments in education, the role of the newer educational media, the needs of those on the firing line, the teacher in the classroom, and the services that try to help teachers do their job apoly equally to science as to other subjects.

A few points, however, still remain to be made. Scientists and technologists, technicians or not, look upon the new educational media from three different points of view:

In the first place, there is a contribution, it is felt, which science and technology can make to the solution of the problems posed by the population explosion, by shortages of instructional personnel, by the rapid obsolescence of knowledge and broken knowledge. These come both from behavioral sciences where we can hope to learn more about man as a learning animal and to find ways to enable him to do so more efficiently, durably, and effectively, and from the communications technologies wherein we utilize all the elements that come to bear upon the learner and not in overlapping ways. We utilize the film where it can do the most effective job, the teacher's role where the teacher can do the most effective job for particular learners and that will vary, of course, as the learners themselves do, and find ways above all of meeting the task put upon education at least no less efficiently than in the past and hopefully with greater and greater success.

The second aspect is the role of experience with existing media in aiding the creation of new versions of new materials. (I will come back to this in a moment.)

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* This is an unofficial transcript of a tape-recording of Mr. Paulson's remarks at the conference. It is not an official statement cleared for release and should, therefore, not be quoted. The copy sent to the author for corrections and clearance had not been received at time of preparing this report.

The third, of course, is in bringing about the most wide-spread, wise use of all the resources that exist so that any child, or any student, wherever he may be is not deprived of an opportunity to learn simply because the tools have not been provided for him. Scientists and science teachers have come to generally agree with the propositions enunciated by our hosts, Dr. Guss and Dr. Rufsvold, in their statement—there exists critical need for accurate, systematically organized, easy to use, complete and continuously up-dated information about materials. They have endeavored to make some contribution along these lines themselves and the scientist's contributions comes out of one particular conviction in this regard: In subject matters, the knowledge of those who are really first-rate in their field must really be brought into the process of appraising and assisting in the making available for wide-spread utilization all sorts of instructional aids.

The National Academy of Sciences National Research Council and the American Association for the Advancement of Science, two bodies which can look at science comprehensively because they include members who represent all of the diverse species and sub-species and varieties of scientists, have joined together over the last four or five years in several efforts which have attempted to come at this problem not yet with very fruitful results but as a useful spur in listing interests in kinds of questions in which this conference is concerned and in perhaps in suggesting some kinds of considerations that need to be taken into account. At an early stage, an effort was made to find out, to try to meet inquiries if nothing more, what usable science films, filmstrips, television presentations existed. They found that even by using all of the existing bibliographic sources no complete comprehensive list could be compiled even for a single field. The experiment was narrowed down to the field of mathematics—just to get an idea of what sorts of things are available and how good they are. Even here, it took one person several months to compile at least a fairly comprehensive but by no means complete bibliography and a large number of persons to try to review all of the films and try to develop some format for presenting adequate information so that users would really know how valid and useful the individual films, television presentations or whatever would be in their particular teaching situations. Similar kinds of explorations are now going on among chemists, geologists, anthropologists and are in the offing among physicists, biologists, and others.

All of these efforts reflect need for something on the order of the first comprehensive type of catalog proposed for consideration by this conference—a source to which those who wish to prepare more detailed summaries, abstracts, and analyses can go, where they can really be sure that they are getting virtually all of the items that exist. This is a source, however, and not the kind of thing which would meet the needs of classroom teachers, either the elementary or the secondary or college level. For the latter, the general view is that subject matter-divided publications, perhaps not split very narrowly and perhaps designed in complementary format so that one can readily go from one to another with comprehensive appraisals of films, would be particularly useful. The scope of both of these services is something which needs further exploration. Ideally, they would beworld-wide. There are for instance, some excellent films on developmental embryology which have been made in Denmark and Norway and very little used in this country except by occasional individuals who have studied abroad and stumbled upon them.

There is a question of scope of kinds of educational aids. Physicists, for instance, are becoming interested in demonstrations, assemblies which can be operated by students not simply pushing a button but actually operating and designed in such a way to show what is happening—not merely a black box that can do perhaps a certain part of the instructional job. Should this kind of thing be included in one's comprehensive catalog or is this a special case and should this be made available only in special forms? The selection of topics for special catalogs, for special listings, and the problems of indexing, so happily pointed out by Mr. Durr plague all of these considerations. One can speak of chemistry and physics and mathematics and biology but is a film on photosynthesis yet placed in chemistry, biology, and physics because it deals with the relation of behaving systems to life, deals with chemical events, and deals with chemical events in the living system? Solutions to these problems are not at hand but they are important things to be considered in determining how to design listings which will have maximum utility.

A further problem in relation to the sciences, perhaps even in greater degree than other fields, is the relation of research films to educational material. Motion pictures first came into use as a research tool and that use has grown enormously as have other devices for recording data and helping to analyze data. Much of this research footage could be very useful in the design and construction of educational films for different levels. To what extent should information about what exists in the way of research films be introduced into educational bibliographies which have been entirely separate and reserved for those who are involved in the creation of new instructional materials. These become rather sizable questions when it turns out that there are probably thousands of research units around the U.S. who are turning out films and devising new techniques for using films for viewing particular kinds of systems that would make them much more clearly understandable if they could be incorporated into instructional media.

Finally, a most important consequence of well-conceived efforts to maximize the availability of trust-worthy and comprehensive information on the newer educational media should be the identification of inadequacies in what is available. This is essentially the same problem as pointed out by the previous speaker. Knowing what exists, one can then think about what ought to exist and interest people in devising it. More and more first-rate scientists and teachers of science are willing to devote substantial effort even though it must be taken in the rather strenuous times from other pressing matters and research itself to the development of new types of courses and types of instructional programs. In order to do this kind of job as well as possible one would like not to duplicate and overlap the things that exist but go beyond these to provide real improvement in the effect of teaching aids. Not knowing what exists one has to start off from a guess point rather than useful bench marks.

Scientists and science teachers thus would concur that procedures in general like those recommended here are absolutely indispensable if we are going to move forward both in putting our technological progress to work in education and in making it possible for every learner to profit from all the things that are being done to try to make learning as productive as possible.

METHODS FOR STORAGE, RETRIEVAL AND DISSEMINATION OF INFORMATION

PRESENT-DAY METHODS FOR THE STORAGE AND RETRIEVAL OF INFORMATION

Jesse H. Shera

I have been asked to direct our attention this evening to the newer methods for improving bibliographic organization, but I would prefer to speak of *system* rather than *method*. By system I mean the entire complex of all the elements which comprise the total process of generating, reproducing, retrieving, and disseminating the content of graphic communication. The objective of all bibliographic devices and techniques is to make certain that the appropriate information reaches the person or persons who need it, and it is the efficiency with which this process of transfer from library store to the user's hand is carried out that is the final test, and the only real test, of a system's value.

It would be impossible in the short space of time allotted to me to describe in detail the various new systems (and their dependent techniques and devices) that have, in recent years, come on the market. I must, therefore, concentrate upon the theory and philosophy of bibliographic organization that these newer mechanisms represent, the kinds of bibliographic problems they can be expected to solve, and something of the capabilities and limitations of the major types of systems represented by them. A more detailed analysis of some of the major systems is presented in the table (prepared by Allen Kent of the faculty of the School of Library Science at Western Reserve) which has been distributed to you, and is appended to the text of these remarks. Though the data in this table were compiled in 1957, they are still accurate with respect to most details.

The first problem to which we must address ourselves, and one which I believe is especially important to the deliberations of this conference, relates to a determination of the boundaries within which the system must operate and its "parameters," to employ a somewhat misused term that has infiltrated the jargon of the documentalist. In short, we must first of all ask ourselves exactly what it is that we want the system to do—what is the universe of discourse with which we are concerned? This is particularly important in an area like the audio-visual field, where existing bibliographic coverage has been very inadequate and little is known about the demands that will be placed upon the system, or systems, that we may select. Are we primarily concerned with the need for a "current awareness" service, a service that will keep us informed of new developments as they are reported in the literature, or is our greatest need for improved "retrospective searching"? I rather expect that for the newer media the need for the former is greater, but there certainly are areas (such as the listing of musical and other sound recordings) where retrospective searching is very important indeed. But because I am relatively inexperienced in the audio-visual field, it is you who will have to decide upon the boundaries within which we must plan our program of bibliographic organization; this, I assume, was the real reason for the calling of this conference.

But there are other factors to which the characteristics of the system we elect must be related. We must decide upon the depth of analysis needed for our system to achieve maximum results. We must ask ourselves how thoroughly the material must be analyzed. This afternoon Mr. Durr provided us with an excellent example of a system of subject headings in the field of health which broke down because it lacked sufficient discriminating power, with the result that the analysis provided information in "hunks" rather than in meaningful units that would have been useful to the inquirer. At Western Reserve we are especially interested in the problem of depth of analysis because we have pending with the Office of Education a proposal for a pilot study of the organization of data about recordings, and the discriminating power of the system is particularly important here. It requires a system with a far greater depth of analysis than that provided by any existing bibliographic tool to answer such questions as: Who has used Joachim's cadenzas in recording the Beethoven violin concerto? Has anyone recorded the Haydn theme for which Brahms composed his variations? Did Flagstad ever record with Melchior, and if so, what? Is there any recording of solos by oboe, bassoon, and tympani? Yet such questions are typical of those which confront musicians, musicologists, and teachers of music.

We must also decide upon the importance of terminology to the undertaking before us. Are we to become involved with a highly specialized vocabulary? Must we, therefore, employ a linguistic or thesaurus approach? Should we use an alphabetical arrangement, comparable to the dictionary (or card) catalogue of traditional library practice? What is our dependence upon, or freedom from, linguistics? Audio-visual materials relate to sounds and pictures as well as words.

Because, at times, we are dealing with non-verbal materials, we may wish to consider a classified or logical arrangement, or some derivative of logic such as coding. Some systems employ a referential, rather than an hierarchical, structuring of the materials organized by them. To what extent do we wish the system to correlate either related or unrelated materials? This afternoon we talked at length about "inter-media" systems, and for these the power to correlate seemingly incompatible materials would appear to be especially important.

The patron, too, exerts an influence upon the choice of a system. Who is going to use the system we select? And for what will he, or they, be using it? Already several user points of view have been presented at this conference by the schools, the universities and colleges, the public libraries, the commercial interests. All of these have valid claims upon our resources. Are we to attempt to reconcile these claims with a single system, or shall we fragment our system into a number of independent, or quasi-independent, units that are designed specifically for a particular group, but remain capable of coordination with other units? What about the pattern of dissemination? Should we have a highly centralized service, or will our needs be more effectively served by a network of coordinated centers based either on geographic areas or on type of service? Other possibilities may be considered: a union catalog; current lists published at frequent intervals and cumulated as the need arises; highly selected listings chosen according to areas of interest or excellence of material for specific purposes; or definitive catalogs in book form that will make available to any agency the complete bibliographic story.

These alternatives raise the inevitable question of the form, or forms, for the dissemination of our materials. I assume that the standard bibliographic citation is familiar to all of us, as is also the abstract or digest. But other possibilities present themselves. The use of miniaturization, e.g. microfilm, microcards, and similar microphotographic techniques, is becoming increasingly acceptable to the scholar. The use of IBM cards, sometimes with microphotographic inserts though expensive, has proved practicable in certain situations, and I think that use of magnetic tape which can be scanned electronically at a central agency or reproduced and distributed for local use will become increasingly prevalent in the next few years. There is, then, an entire spectrum of possibilities, extending from the simplest and most elementary form of identification (the use of a simple serial number) to the actual reproduction and distribution of full-sized copies of the entire document to whoever may need it.

Finally there is the vexing and ubiquitous problem of economics, for in documentation, as in all other forms of human endeavor, "money makes the mare go." I submit, however, that we should first decide what system is best suited to our needs and leave the problem of its financing until last. We may eventually be compelled to tailor our suit to fit our cloth, but we should not argue from poverty. We should "think big," as the chambers of commerce say, and I am convinced that if we can honestly justify the magnitude of our plans, we will eventually acquire the economic resources to put them into operation.

I confess to having placed before you a rather formidable array of questions which, if we were to attempt to answer them all, should keep us well occupied for the next forty-eight hours. I anticipate that we will not be able to answer them all, but at least the awareness that they must eventually be answered, or even the recognition that they exist, is in itself a measure of progress the importance of which is not to be minimized.

With these problems in mind, let us now direct our attention to the systems themselves. These can be divided into two major groups, or perhaps three if a combination of the other two is considered to be a third. (but this last may be reminiscent of Polonius' uninspired classification of drama.) The first group I have designated, for want of a better term, document systems—those systems in which the document itself, or the bibliographic representation thereof (i.e. the bibliographic unit) is the focus of the system. The other I have called aspect systems, because the focus of the system, that which is manipulated, is a concept, aspect, or subject. Aspect systems deal primarily with symbolic representations of the subject content of graphic records, rather than with the graphic records themselves or representations of them. The third category is, as I have indicated above, a combination of the other two—a way of escape between the horns of the dilemma when the classifier is not sure how a system should be characterized.

These new documentation systems are most easily understood, I believe, if we trace briefly their historical evolution. Probably the system most familiar to scholars, and even to the layman, is the traditional library classification by which books are arranged on the library shelves according to the subjects of which they treat. Melvil Dewey, who has taken the credit for initiating modern bibliographic classification, received his education at Amherst at the time when Darwinism was affecting a revolution in the biological sciences. One should scarcely be surprised, therefore, that Dewey and his followers turned to biological, or more precisely, taxonomic, classification as the pattern to be followed. They saw books as bibliographic specimens which, like biological or geological specimens, could be arranged in an hierarchical pattern according to certain characteristics. Such treatment was a quite natural transfer from one field of knowledge to another though based on a false analogy, it was widely accepted, and it led to a system of pigeon-holing bibliographic units called by R. A. Fairthorne "marking and parking." The logic on which it was based was deceptively simple—this is a book about such-and-such a topic, therefore it is to be placed in such-and-such a compartment.

The system failed to fulfill the requirements of good bibliographic organization because books do not, like geologic specimens, have a limited number of well-defined and precise characteristics according to which they can be arranged. Books have an almost infinite number of characteristics, determined not only by their content but also by the ways in which they are used, and no taxonomic classification can respond to the great variety of characteristics that even the simplest books present. To state the limitation of book classification another way—a library may be regarded as one continuous bookshelf upon which any one book has position but not dimension. A book standing on the shelf of a library, then, can be related to only the book to its right and the book to its left. But books have many dimensions, and any attempt to force a multi-dimensional object into a uni-dimensional system must obviously end in failure.

When Otlet and LaFontaine and their associates, devised the Universal Decimal System for their projected world documentation center at Brussels, they attempted to introduce additional dimensions by the use of "signs of association." These were artificial, even mechanical, symbols intended to reveal or represent relationships between and among the constituent parts of the classification schedules. The system achieved a measure of success; and even today, especially on the continent of Europe, the UDC enjoys great popularity. It was a good try, but the relationships it could reveal were still very limited, and it resulted in extreme complications when one attempted to take full advantage of its possibilities. In fact, it can become so complex that it is quite self-defeating, and thus lead to obscurity rather than revelation.

S. R. Ranganathan, the great Indian librarian and student of bibliographic theory, devised a system of book classification known as the Colon Classification which both simplified and refined the technique employed by the inventors of the UDC. He began with an analysis of the ways in which knowledge grows, and from this he deduced that all knowledge can be expressed in five "facets"—time, place, material, energy, and personality; and, he constructed a classification system that made possible the relating of these "facets." Ranganathan has probably contributed more to the advancement of our understanding of bibliographic classification than any other single individual, and the results of his work, as we shall see later, have implications far beyond the simple arrangement of books on library shelves. Other variations of book classification have, of course, been attempted (at the Library of Congress and by Charles A. Cutter, James Duff Brown, Henry E. Bliss, and others), but time does not permit their description here. All of them are document systems in that they are directed toward the physical ordering of the graphic records themselves.

Book classification was supplemented by the classified and the alphabetical subject catalog, which were the first of the aspect systems. Charles A. Cutter, usually regarded as the father of the modern dictionary catalog, gave added dimension to the classification system by the duplication of bibliographic entries under as many subjects, or aspects, as were appropriate to the book being catalogued.

An added dimension to classification was provided by the hand-sorted or marginal punched card. With this form of document system, the card itself is the physical unit manipulated, just as the book is the physical unit in a classification scheme. In a real sense the card is the bibliographic unit, for the general practice usually involves reproduction of an abstract, or even an insert in microphotographic form of the entire document, on the face of the card. To permit sorting, the subjects to which the document relates are coded and punched around the margin of the card. The use of coding, especially superimposed coding, has given the hand-sorted punched card more dimensions than is practicable with the use of the traditional dictionary or classified catalog. But the limitations of marginal punched cards are serious. The number that can be sorted is sharply restricted by the time required for sorting by hand and the patience of the user. Marginal punching, even when several rows of holes are used, provides only a small field, and friction between the cards during the sorting process can seriously impede the free fall-out of the desired items. The system has been called "the poor man's IBM," a characterization that rather succinctly implies its virtues and its weaknesses.

The rising popularity of microphotography made possible other applications of and variations on the basic document system technique—the technique of "marking and parking." The early versions of the Rapid Selector, Jacques Samain's Filmorex, and other photoscopic storage devices, related to the retrieval of documents rather than to the retrieval of information. They were no more than mechanical stack-boys who "mark and park" the bibliographic units with which they are stocked. Even the much publicized Eastman Minicard did not entirely free itself from the limitations of sequential search. To be sure, it fragmented the microfilm roll into minute bits that could be sorted in a variety of ways, but it still remains only highly engineered and refined marking and parking. It represents, as no other device does, the error of first designing a piece of hardware and then searching for a system to exploit its capabilities. This is indeed putting the cart, albeit a very elaborate and expensive cart, before the horse.

The true aspect systems, as indicated above, derived from the subject index and the subject catalog. Taube's Uniterms, for example, are no more than a form of word indexing—the fragmentation of subject headings into verbal isolates which can be combined, or as Taube says, "coordinated," in an infinite variety of ways. Thus evolved Coordinate Indexing—one form of concept coordination. In the Uniterm system, all documents relating to a given aspect, or subject, are listed serially on the card for that aspect. Coordination is obtained by comparing the document numbers for one aspect with those for another, and the numbers common to both relate to both aspects. For example, a document that is listed on the aspect card for DOGS and is also found on the card for DISEASES, obviously relates to diseases of the dog. The fallacy of the system, apart from its over-simplification of an intellectual process that is essentially very intricate, lies in its inability to reveal the nature of the relationship between, or among, the terms "coordinated." It does not coordinate terms, it only combines them. This afternoon, Dr. Gaarder, in discussing the structure of the Spanish language, used as an illustration the phrase "Mary hit John," but in coordinate indexing of the terms *John*, *hit*, and *Mary* the direction of the action is not indicated, and one cannot tell whether it was John who was guilty of ungentlemanly conduct or Mary who was unladylike. "Noise" in the Uniterm indexing system is also generated by reversibles such as blind venetian, or ambiguities such as "the Diet of Worms." Finally logical sum and logical product create difficulties for the coordinate indexing promoted by Taube. It was Col. Frank B. Rogers, director of the National Library of Medicine, who pronounced the supreme verdict on the Uniterm system. In reviewing one of the earlier publications of Documentation Inc., he quoted from *Pickwick Papers*:

> "An abstruse subject, I should conceive," said Mr. Pickwick.
> "Very, sir," responded Pott, looking intensely sage, "He crammed for it, to use a technical but expressive term; he read up for the subject at my desire, in the *Encyclopedia Britannica*."
> "Indeed!" said Mr. Pickwick, "I was not aware that that valuable work contained any information respecting Chinese metaphysics."
> "He read, sir," rejoined Pott, laying his hand on Mr. Pickwick's knee, and looking around with a smile of intellectual superiority, "he read for metaphysics under the letter *M*, and for China under the letter *C*, and combined his information, sir!"*

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* *Bulletin of the Medical Library Association* v. 42 (July, 1954) p. 383.

The Batten, or Peek-a-Boo, system was simply a mechanical refinement of aspect systems employed by some users* to expedite the comparison of the document numbers listed on the aspect cards. In this system, holes are punched opposite those numbers which designate documents relating to the aspect for which the card stands. When two or more cards are superimposed, those document numbers which "coordinate" can be identified by the transmission of light, while all others remain opaque—hence the name Peek-a-boo. But the number of cards that can be conveniently and accurately compared in this way is limited.

Zato-coding, developed by Calvin Mooers, represents a distinct advance over the Uniterm technique. Whereas Taube insisted that Uniterms can be taken directly from the text to be indexed, Mooers made use of a standardised vocabulary; he called the terms "Descriptors," which were carefully identified only after a thorough study of the subject field to be indexed. Mooers also made use of random coding instead of depending upon the alphabetization of verbal isolates as Taube has done.

A variety of other systems has been, and is being, devised. Many, especially those using the standard IBM punched card or magnetic or punched paper tape, represent a combination of the document and aspect approaches. For a considerable period of time many people have been experimenting in a variety of ways with the use of IBM cards for indexing purposes. The New York State Library, for example, was one of the first agencies to prepare catalogs and bibliographies with the use of IBM equipment. During the Second World War, the Central Information Division of the Office of Strategic Services experimented extensively with the use of IBM equipment for the indexing of large quantities of material received from the U. S. Office of Censorship. In Italy, Father Busa has been using IBM equipment in preparing a concordance of the works of St. Thomas Aquinas, and H. P. Luhn of the IBM Corporation has been working for a number of years on the mechanization of information retrieval processes. The Luhn Scanner was an early creation, but the more highly refined B-794 never got further than the drawing boards. Recently he has been promoting a system of indexing by "Key Words in Context" (KWIC) which, though it is now being marketed by the Chemical Abstracts Service, would appear to be a definite reversion to the old and obsolete system of uncontrolled word indexing. For several years the U. S. Patent Office has been employing punched card equipment in an effort to solve the very difficult and complicated problems of patent searching. However, it must be said that company policy at IBM has rather disregarded the potentialities of electronic applications to information retrieval.**

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* Among them Wildhack at the U. S. Bureau of Standards, for the indexing of material on basic instrumentation, and Cordonnier in Paris.

** See: Francis Bello. "How to Cope with Information." Fortune v. 62 (September, 1960) p. 162-167; 180ff.

At the School of Library Science at Western Reserve University we have, for the past five years, been engaged in an intensive program of research into new and improved methods for information retrieval, and the Computer Department of the General Electric Co., is now building a high-speed machine that will fully mechanize the system we have devised. Up to the present we have been able to test our work only on home-made equipment using mechanical relays and eight-channel punched paper tape. The Western Reserve System of "semantic factoring" makes use of a rigidly controlled vocabulary encoded in such a way as to indicate not only generic relationships, but also function, process, agent, product, etc. To do this we employ symbols which we have called "role indicators," so that, to return to an earlier illustration, there will be no possibility of accusing John of hitting Mary when it was really she who delivered the blow. It is interesting to note that though it was developed quite independently, the Western Reserve approach has much in common with the underlying theory of Ranganathan's faceted classification, and the principle of the "role indicators" is strongly reminiscent of his facet formula. But this is not the appropriate place to describe the Western Reserve system in detail. Suffice it to say that the system has proved itself to be successful in operation in the physical and biological sciences, and that we are now especially eager to test its effectiveness in the social sciences and the humanities.* The charge has often been made that many of these systems, including the one at Western Reserve, will operate well in the precise sciences, where the terminology is reasonably well standardized, but may prove ineffective in such areas as the humanities, in which the linguistic problem is much more difficult. Therefore, we are particularly eager to test the system in one of the fine arts, such as music, which will present an entirely new complex of problems. Here it is relevant to point out that the documentation problem is, of course, a communication problem, and hence linguistics is fundamental to it. It is not surprising, therefore, to discover (as we have at Western Reserve) that even in dealing with scientific information, linguistic competence, especially the ability to analyze language, is even more important to the documentalist than scientific knowledge. For example, an abstractor can, in a relatively short time, achieve a reasonable mastery of the terminology of metallurgy, but if he is unable to analyze the structure of a sentence, if he is unaware of the parts of speech and their relationships to each other, he will make a poor abstractor however much metallurgy he knows.

Finally, the virtue of mechanized information retrieval systems lies not only in the speeds at which the machines can be made to operate, but also the degree to which the systems can simulate the thought processes of man. We think, we conceptualize, in terms of pattern. It was Sir Charles Shernington, I believe, who likened the human brain to "a magic loom." We also organize our bibliographic resources in patterns, but the pattern of the organization of graphic records does not always coincide with the patterns of our thought processes. Obviously, the degree to which these patterns coincide will determine the effectiveness of our information retrieval systems. Therefore, we can learn much from the studies of the epistemologists and the researches of the brain physiologists. As we learn more about the brain, we can build better machines for information retrieval. And as we work with these machines, we should achieve a better understanding of the operation of the human brain. There is a reciprocity of relationship here that should yield big dividends in the years ahead. No one can really tell what the future holds, but I suggest that there are two areas, at least, in which we may anticipate an early "break-through." The first is in mechanized character recognition, which will make it possible for machines to "read"; and the second is in the development of random access memories, which will make it unnecessary to search through an entire roll of tape or microfilm to find the desired information. Once these have been achieved, the revolution in bibliographic organization will have really arrived.

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* James W. Perry and Allen Kent. Tools for Machine Literature Searching New York. Interscience Publishers. 1958. p. 972.

The contemporary world of bibliographic organization is suffering the pains of growth, the confusion of a world in transition.* The air is filled with claims and counter-claims. There are a number of commercial interests that have been unscrupulous in the extravagance of their promises. No honest person can pretend to have solved the documentation problem. But for all its turmoil it is an exciting field, a field that has made astonishing strides in the past decade, a field in which there is great hope for progress even though the forms that will emerge are not now entirely clear to us. But, in all this uncertainty one thing seems certain—even the most effective techniques of today will probably be completely obsolete in ten or twenty years.

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* The best detailed review of new systems for the retrieval of scientific information is to be found in U. S. Congress. Senate. Committee on Government Operations. Documentation, Indexing, and Retrieval of Scientific Information. Washington. Government Printing Office. 1960. p. 283. (Document no. 113.)

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AMERICAN DOCUMENTATION

TABLE I. LITERATURE SEARCHING MACHINES AND SYSTEMS

Name of systems or equipment	Examples	Manipulative	Storage		Delivery
			Indexing Possibilities	Number of Documents	
1. Hand-sorted punched cards	McBee cards, E-Z sort cards, Flexisort cards	Desired cards selected by manual manipulation of needles in holes or slots. Multiplicity of needles may be used with certain auxiliary devices.	*Direct coding:* limited by number of holes in cards (up to about 200) *Superimposed coding:* limited in number of index entries (2 to about 20) *Relationships:* not convenient to record complex relationships among index entries	Limited by tolerance of user to needling operation — (3,000-15,000)*	Actual card containing abstracts, indexes, and bibliographic information.
2. Hand-manipulated aspect cards (a) number matching (b) identification of pattern coincidence	(a) Uniterm cards (b) Batten cards, Uniterm cards	(a) Columns of numbers on one "aspect" card matched visually against numbers on another aspect card (b) "Aspect" cards superimposed, and desired document numbers detected visually by light passing through coincident holes	Limited by increasing number of false combinations as "depth of indexing" increases	Limited in convenient use by quantity of document numbers that can be recorded on a single "aspect card" (up to 5,000)	Document number is identified which then serves as entree to document file arranged in accession number order.
3. Machine-sorted punched cards (a) Fixed field (b) Intermediate (c) "Free field"	(a) Remington Rand, IBM, and Powers Samas "standard" sorters and collators (b) IBM "101" (c) IBM Luhn Scanner, experimental IBM X 794, Census "100"	Punched cards maintained in drawers and fed into machine in stacks of up to 500.	(a) Similar to hand-sorted punched cards, above; certain relationships may be shown (b) Similar to hand-sorted punched cards, above; certain relationships may be recorded (c) Unlimited number of index entries per document; certain relationships among index entries may be recorded	(a) Limited by tolerance of user to sorting operations in fixed fields (up to 15,000)* (b) More convenient than (a), effective files up to 25,000* (c) Limited by tolerance of user to quantity of cards (up to 75,000)*	Document number is identified which serves as entree to document file. Limited amount of bibliographic material or data may be printed on face of card or recorded on microfilm insert
4. Machine-manipulated aspect cards (a) number matching (b) pattern coincidence	(a) Experimental machines developed on ONR funds (b) Peek-a-boo (NBS)	Same as for 2 (b) above, except that coincidence numbers are detected either mechanically or by activation of light sensitive terminal.	Same as for hand-manipulated aspect cards	Same as for hand-manipulated aspect cards	Same as for hand-manipulated aspect cards
5. Tape-reading devices (a) magnetic tape (b) punched paper tape	(a) IBM "700" series, Remington Rand Univac series digital computer (b) WRU Selector	Tapes are stored on reels, entries are scanned either electronically or by means of mechanical "feelers." Entries may be transferred automatically to duplicate or output tapes.	Unlimited number of index entries per document. Unlimited complexity of relationships among index entries.	Limited by time available for search as opposed to scope of search desired.*	Document number is identified which serves as entree to document file. Entire encoded "message" or abstract may be reproduced if desired
6. Photographic film devices (a) Fixed field (b) Intermediate (c) Free field	(a) Rapid Selector (b) Filmorex (c) Minicard, Photoscopic storage device (International Telemeter)	(a) Film is stored on reels, and is transferred to other reels as scanned (b) Unit pieces of film manipulated and scanned (c) Encoded information on film is scanned in sequence, stored on unit pieces of film or rolls; or discs	(a) Six index entries per document (no relationship) (b) Twenty index entires per document (no relationship) (c) Unlimited number of index entries (complexity of relationship not yet developed to limit)	Same as 5, above.	Selected film or film card contains coded information, as well as microcopy of document. For photoscopic storage device, same as 5, above.

*Subfiles or total files may be searched as desired.

BIBLIOGRAPHICAL CONTROL
OF NEWER EDUCATIONAL MATERIALS

Ralph R. Shaw

The basic process of bibliographic control, regardless of the type of material to be controlled or the mechanical devices selected for effecting this involves:

1. Finding out what exists that falls within the scope of the bibliographic service to be provided.

2. Collecting what exists, or at least information about what exists in some detail, so that the individual bibliographical entities may be identified.

3. Description of each bibliographic unit in standard form in order to differentiate it from other bibliographical units and to provide location and/or procurement information and, if feasible, to provide selection information through detailed analysis of the content, the point of view, the method of presentation, and other factors that will aid in determining with reasonable precision whether the item covers the topic sought in a form in which it is suitable and useful and at a level in which it is usable.

4. Disseminating information about these items so that everyone concerned can readily find out what exists and may obtain copies of current or retrospective materials as needed and by the suitable method whether the suitable method be loan, rental, purchase or other.

Now one of the things I want to warn you about is that if we achieve bibliographic control of the newer media it is going to result in a great increase in the use of materials. In every case in which we have improved bibliographical services or even available library buildings the result has been a very great use. Every time we turn out a popular reading list in the library, if it is well done, it results in increasing the load of use on those books and if we remain in the class of having one copy of a teaching machine text available in the state library and we stimulate trade so that 200 people want it at once you are going to be in trouble and I think we are going to have to take a systems approach to this, starting out with what we are trying to achieve, what these machanics will do, and including how many copies we are going to need if we are successful. If we are not successful, it doesn't make any difference whether we do this or not. If we are successful, we are going to have to be prepared for it. So we can't just do this as listing and dissemination job without thinking the whole problem through and here specialists in the newer media are going to have to do a good part of the thinking.

Given these four basic requirements for a bibliographical service of any use, I would say the first of these steps is essentially an intelligence type of operation designed to collect the raw data. It is similar in nature to the task of Publishers' Weekly. There would appear to be little problem about collecting information from the major suppliers of newer educational media, just as there is little problem about keeping up with the titles issued by major book publishers. While there would no doubt be the usual problems, even with major suppliers, of changes in title, price and publication data, and if advanced notices are attempted, of ghosts created by titles that fail to appear, these are minor problems. The major problem is that of finding out what has been issued by other than the primary sources of supply so that the listing may be reasonably complete. This involves work by individuals of high competence in the field who are constantly in touch with developments in each aspect of the field and who can, therefore, follow up more effectively on the other than common sources of supply.

Collecting what exists, whether this is done in one place or in a combination of libraries storing newer educational media, would appear to be indispensable step for a bibliographic service of reasonably high quality. If it is not done then all description must be based on secondary records and in many cases the analysis of the document would be limited to publisher's blurbs. No matter how ethical the publishers, the blurbs would certainly be uneven in quality and would not necessarily bring out all of the factors that are needed to provide all the kinds of information needed for all kinds of users and all kinds of use on a uniform basis. Thus if a high quality of entry, including descriptive annotation, is to be achieved there is no substitute for collecting the items and for basing the description on actual observation of the items on the part of skilled reviewers.

What is said about the items in paragraph 2 applies equally to the problem of bibliographic description except that here some information may be required that is not recorded on the document itself and handling the document will not suffice. Among the types of useful information are sources of supply other than the original publisher, such as libraries in which it is located and from which it may be borrowed, dealers who handle it, and similar data. Here again skilled technicians who continue to be aware of all that is going on in the field are required.

The types of audiences to be served and the limitations upon the equipment available would appear to make it necessary to do this in considerable detail and with considerable knowledge of the factors that affect usability of the materials at the various grade levels, etc. This raises the question also of whether the audience to be reached includes every school teacher of third grade classes in the country. It might be better to consider bibliography on several levels rather than a single bibliographical tool. This would, in turn, affect not only the types of materials listed but also the mechanism used for dissemination of information about the types of materials and the detail in which they are to be described.

The decision on how detailed the description and annotation is to be depends not only upon the type of materials, the grade level of materials, the audience to be served, and the equipment available, but also upon the total numbers of items to be brought under bibliographical control. What we are dealing with appears to involve at least 50,000 items with the addition of 10,000 items per year, so the suitable tools are quite different than if it involved a matter of 2 or 3,000 items a year. Also, if only a limited number of central service agencies need total bibliographical information then a bibliography or other tool including all of this material would be too confusing as well as too expensive to be useful at the second grade level in a small grade school in a small town, so it might be necessary to prepare a number of highly selective bibliographies by subject and grade level. If this need is clearly established then we begin to see parameters for handling materials that begin to become favorable for machine handling in conjunction with normal publishing procedures.

We do not have firm data on which to design an optimum system, but we can postulate a field in which we have some 50,000 items and add about 10,000 items per year. Assuming that full annotation is required, and that each description would require about a third of a page in its final form, this would involve approximately 15,000 pages of material in the basic bibliography and an additional three or four thousand pages each year. If this were printed in conventional form and made available in every school or to every teacher, a very large amount of waste would result and the problem of handling 15 or 20 1000-page volumes, even with each entry given once only, and searching through them would probably result in failure to use them except for a few people who are especially interested. By the time 100,000 items are involved the project would get so bulky that there would be a tendency to cut down the amount of description to get more items per page and this would, as is commonly done, reduce intellectual quality to make it possible to publish the work. The primary question that would have to be decided in this respect is what is the proper or optimum level of intellectual quality of treatment of the newer educational media to make them of maximum usefulness in education rather than how many pages can we afford to print or how many pages can people be expected to search. If we could decide this then the parameters for design of the system of production and distribution of such lists or of servicing of the lists would become much clearer.

In dissemination of information about what is available, the choices, in general, are maintenance of a service bureau which (automatically or semi-automatically or annually) produces lists of what is available that meets the specifications of the inquirer or potential user. The kind of equipment to be used depends upon the mass of material, the frequency of demand, the types of demand, the intellectual level or intensity of demand, and other factors on which we simply do not have enough information to permit wise and final design of the system. If there is need to produce the list in multiple copies, then a system that produces reproduction copy ready for offset printing, or letter press printing for that matter, might be optimal. If, however, each list produced has to be tailor-made to personal specifications and would not be of general enough value to justify multiplication of copies, then obviously a mechanism that makes it easy to produce a single copy would be optimum. This could be done by using a device like the photo-clerk in connection with a conventional card or loose leaf or bound sheet file.

The question is not whether we will need to use a mechanical form. The question is rather which mechanical form we should use or what combination of mechanical forms will best meet the needs, both in the sense of program efficiency, i.e. the social purposes to be served, and in the sense of operational efficiency, i.e. the speed and cost at which the operations are performed.

Since the end product must include not only a listing of pertinent references but enough information about them so that each user will be able to find out which of the items meets his particular needs at the moment without having to have access to all the documents and examining them to determine whether they meet his needs, the absolutely indispensable requirement of this system is that the information about what is available be displayed to the inquirer in full enough form so that he can determine whether or not the item will serve his particular need.

This means that even if we decided to keep this in the mechanical form of a card catalog, the cards would probably have to be 5 x 8" in size, rather than 3 x 5" in size. It also means that any mechanical system, whether it be a punched card sorting system, a keysort system or a Univac must provide this end product. Since it is manifestly uneconomical to write 300 word abstracts on punched cards that can store only 80 to 90 characters (about 15 words) this means that if we use devices like punched cards or peek-a-boo cards, a second file would have to be maintained in which the full abstracts would appear and after the search is completed by machine, we would have to go to the second file to find manually the items listed and examine them and then manually duplicate those that are pertinent before we have achieved a usable end product. All these steps must therefore be costed in comparing the punched card or peek-a-boo systems with a standard card catalog in 5 x 8" card form or with another mechanical device popularly known as the printed book.

Similarly, high speed computers, which may cost a thousand dollars or more per hour to operate, are very limited in their internal storage capacity and are most inefficient when their print-out time is high in relation to the searching time. This would appear to rule out electronic computers for our purpose here.

The remaining devices are (1) conventional card catalogs in 5 x 8" dimension (2) printed or otherwise reproduced multiple copies in bound or unbound form (3) punched or notched cards with microfilm inserts (4) film storage searching machines of the class of the Rapid Selector (5) a film storage approach which does the job manually by using multiple-track microfilm, thus speeding access time to large amounts of material on film by making the film two-dimensional instead of one-dimensional. (Since the Rapid Selector and multi-track microfilm may not be familiar to all of you, I can, if you like, describe them in a few minutes.)

The major difficulties in use of punched cards or notched cards with window inserts is that if the file is substantial (and if there is not a large amount of material it would be silly to get into machine operations in the first place) the machine running time or needle sorting time quickly becomes excessive, and second, the file is not intact and therefore you cannot be sure when you make a search that you actually get the materials that should be in the file. The same can be said for the very expensive version of the Rapid Selector known as Minicard which attempts to get multi-dimensional approach on film by cutting the film up into little cards. For the size of the universe involved here, punched cards and notched cards would not appear to provide an optimum solution.

The parameters for use of mechanical devices other than the card catalog or printed book would appear to be the following:

1. In order to be machinable, the universe to be handled should involve a relatively large amount of material. By this I mean from 50,000 to 100,000 separate items at a minimum. The field of newer educational media would appear to meet this criterion.

2. There should be need for multiple access to any or all entries from different points of view. In view of the fact that we will have apprcaches by subject, by grade level, by type of equipment involved, by reduction ratio, etc., by method of treatment, as well as by other factors, this field seems to meet the second criterion for using machines.

3. There should be a relatively large amount of change in the basic file, i.e. there should be need for constant and prompt addition of substantial amounts of new materials and probably also for constant deletion of obsolete materials. In other words, the file must not be static. The field of audio-visual materials—phono records, filmstrips, teaching machines, and other newer educational media would clearly appear to meet this criterion.

4. The field should be lacking in good bibliographical control in conventional form. This field seems to meet the fourth criterion.

5. The materials should be relatively frequently used. This is absolutely essential in any machine operation. The one thing determines whether you go mechanical or not is frequency of repetitive use. The thing that determines how sophisticated you can get in machine operation, (i.e. how much you can spend on your hardware) is the relative frequency of repetitive use. Machines are useful when you have a relatively high frequency of repetitive use. They are not useful when you have a low frequency of repetitive use. The higher the frequency of repetitive use the more you can afford to spend on the machine and the faster you can amortize the cost of the machine. The lower the frequency of repetitive use the less you can afford to spend on the machine and the less sophisticated you can get and it doesn't matter what the machine is or what it is for. In other words, if you are going to punch a punch card and then verify the punch card in order to use that card one time to get a poor typewritten copy for reproduction it would be cheaper and faster and better to type it on a standard electric typewriter once. If you can use the same punch card five, ten, or twenty times then it becomes cheaper to put the investment in the

preparation. We simply cannot get around this no matter how fast we talk. So that the absolute requirement is that the materials must be relatively frequently used and I cannot be more specific than that because the question of the amount of degree of frequency will determine the investment we can put into the machine and how sophisticated our hardware can get. Here, of course, we have no evidence as to the amount of use that would be achieved if we could provide rapid and easy access to the information on the level that I am postulating. It seems to me offhand based on general experience, but this is not valid research data, that we would generate a very large volume of use if we could follow through on it to find the audio-visual materials and other new educational materials called for. If it is our pooled judgment that if good bibliographical control were readily available, the frequency of use of such an indexing service could well run into hundreds of thousands of consultations per year which would not be very many when you consider all the school teachers in the country who could conceivably use this. This would not be very many uses per teacher per year. If this assumption is true then again this is the optimum field for mechanization. If it is not true, then we do need to get a better estimate of the market or frequency of use in order to determine both the importance of the field and the kinds of tool needed and if the frequency of use is very low, it may not be worth the effort of doing the abstracting we are talking about at all; that is, if it is going to stay low in service cost.

6. The material should be needed in multiple geographical locations, rather than being used exclusively by a single group in a single establishment. Then again it would be a useful machine operation because the machine can provide multiple sets of cards or multiple tapes to be searched simultaneously in a number of places from a single master copy. This again would be clearly met by the newer educational devices so that it seems to me for once, and this is the first time in a good many dozen or maybe a hundred or more careful examinations of machine applications to handle alphabetic information, I have found one in which it looks as though if we do it on a level of suitable sophistication (i.e. relatively inexpensive hardware) the field of handling newer educational media bibliographic control lends itself pretty readily to machining if these parameters are met. This would quite clearly apply in the case of newer educational materials and the chief question to be determined in this regard is whether one or a few automated central information services could meet the demands or whether the files should properly be duplicated in every state and in every school system, if not in every school. The matter of intellectual level would enter into this also and my assumption is that we would need ready access to the complete files in every major school system, as well as in one or more places in each state. This means that we would have the problem of multiplication of files, keeping these files up-to-date and servicing large numbers of requests from these files, as well as the problem of more or less automatic

production of selective lists for particular purposes which would be reproduced in printed form and sent to each teacher in its field or grade level. If this assumption comes anywhere near the truth then, again, this field is a very promising one for mechanized handling. Given these parameters, combined with the other basic requirements noted above, our choice in terms of types of equipment to be used becomes quite limited.

In the first place, it should be stressed that none of this will change the requirement for intellectual work of a high level in collecting the original material and abstracting and indexing it. In fact it puts an even greater premium on the intellectual input if we are to use it intensively in a large number of locations. If the highest possible level of original analysis of the material is not achieved then the abstracts are not worth dissemination at the level suggested here. If the organization of the material and the original abstracting is not done so as to provide all the required access points--such as grade level, subject, and type of equipment required, and all of the other points that are pertinent in reaching a decision as to the use of the material--then no amount of manipulation, whether mechanical or manual, will achieve the program objective. Thus, the more effort we put into the dissemination side, the more important it becomes that we have something that is really worth dissemination and is prepared by people who have full knowledge, not only of the mechanical dissemination aspects, but of the intellectual and especially the curricular requirements.

It seems to me that dissemination must proceed on at least three levels. One of these would be a static permanent storage level. This, in order to make it available at the major points that should permanently have a record of what is and has been available, would best be done in carefully designed printed books done in offset form from typewriter or photo-composing machine copy or at best from an integratingly designed process in which the original typing which served for the original production of the book would also serve for as your film and your coding, would also serve automatically for production of masters for turning out the selective lists that I will be talking about. This would require careful systems design in terms of the mechanics of offset as well as the mechanics of your searching devices and the mechanics of printing your book in economical format. This would provide from 100 to 500 sets of the complete listing for permanent consultations and it would be kept up-to-date by current cumulative or non-cumulative supplements.

The second would be the dynamic storage and servicing unit which, as I see it, would have to be based on film storage and finding of the Rapid Selector class or the multi-track microfilm class. This form would be made available in all of the larger school systems, in addition to one or more places in every state. In this form, we could answer questions in a matter of two or four minutes, providing teachers with all the data available on the pertinent items, as well as preparing selective current lists. And, here it is possible now, ever since the Yale Selector was built to reproduce selective sections of master film so that if you are interested in material that is coded for primary schools the machine can be run and a new film can be made with all of the coding on it which includes only the primary school material and then if you are looking for subjects in primary schools, instead of having to run through the whole film you can run the film that deals with primary school. This is one of the changes I had to point out because it is important. This is currently being done on a high level and even fourth, fifth, and sixth generation films are being used. The whole problem of wholly controlling film quality so that multiple generations can be made has changed vastly since Eastman Kodak went into research on Minicard which has resulted in great improvement in quality control in film production. The material would be subject to constant revision with the deletion of obsolete materials and the addition of new materials.

The third category would be the preparation of selective one-page or two-page lists, in editions of 5,000 or 10,000 or more and their dissemination to classified mailing lists of teachers who can use them, based on their known subject and grade requirements and the equipment available.

The guestimates that follow are given in order to provide an indication of the order of magnitude of effort and the order of costs that would be involved in providing the service postulated here.

As noted above, the first step would be collection of the materials and their analysis and abstracting. The cost of this, for current service might be of the order of $50,000 to $75,000 a year and this is absolutely prerequisite to any other operation with the material.

The production of the printed book form, assuming octavo format and approximately three items per page, would involve some 3,500 pages per year after the abstracting was done as provided above. An edition of 500 copies could be printed and bound for something less than $16,000 or approximately $35 per set, and there I am assuming we wouldn't be able to take it right off the film. I am including in it the cost of IBM, typewriters and composing so that we can eliminate that step—that would eliminate $7,000 of that $16,000 and would bring it down to half the amount. In neither this nor the abstracting are we including the cost of retrospective coverage.

The best version of the Rapid Selector now available sells for $75,000. This is based on single models built by hand one at a time. If a volume of 100 or 500 or more were generated at one time, this cost would probably be reduced by 50 per cent. To be conservative, if we assume that the Rapid Selector will cost $50,000 in small quantities and that it should be amortized over a period of not more than five years, the machine cost would be $10,000 per year. Filming of the master film for the selector would cost about $500 per year and each copy would cost $50 or less. Since the coding would all be done as part of the filming, it is hard to conceive of a situation in which the service points would use a full-time person. However, if we assume a full-time person at approximately $5,000, this means that each Rapid Selector service center would cost between $15,000 and $20,000 per year, including a reasonable allotment for space, repairs, etc.

While the multi-track microfilm approach would reduce machine costs to $100 or less per year as compared with $10,000 for the Rapid Selector approach, it would clearly require much more labor in locating materials on the film than would the Rapid Selector approach. It is possible that the right solution would be to use something of the Rapid Selector genera in situations in which we had to answer 100 or more questions per day and use one or more of the multi-track film readers in situations where only 5 or 10 or 50 or so questions per day were answered.

The production of popular lists would amount to about $150 for 10,000 copies of a four-page leaflet, plus the cost of addressing and mailing. So, if the center did 100 of these each year, they would be spending of the order of $25,000 per year.

It should be noted that the figures given above are intended only to give a reasonable indication of the order of magnitude of costs involved by the methods suggested, rather than providing budget figures. The actual costs will depend on the intensity of intellectual analysis of the materials, on the number of items to be incorporated in the system and the number to be deleted from the system each year, on the frequency and nature of requests generated, and by the competence with which the program is supervised.

Whenever we have more precise data on the amount and types of materials to be included and better estimates as to the kinds of distribution needed and the kinds of demands as well as frequency of demands that will be received, it should not be too difficult to design, develop and put into operation an effective system for making the newer educational media readily available to enrich school curricula everywhere.

REACTIONS TO THE METHOD PROPOSED FOR BIBLIOGRAPHIC CONTROL OF THE NEWER EDUCATIONAL MEDIA

REACTIONS OF THE AMERICAN LIBRARY ASSOCIATION CONCERNING THE PROPOSAL FOR A NATIONAL BIBLIOGRAPHIC CONTROL SYSTEM FOR NEWER EDUCATIONAL MEDIA

Pauline Love

Mr. Chairman, after the papers yesterday and Miss Guss's statement that this conference will be concerned primarily with Part I of the proposal, I realize that anything additional I can now contribute to this conference might be said in a minute or two. I will, however, present the paper I prepared on the proposal as a whole and will endeavor to do so within the ten minutes now allotted to each of us.

I have been asked to give my reactions as a publisher, rather than as a librarian, to the proposal; and my comments will be made primarily as a publisher and not as a representative of a professional organization. Vitally concerned with bibliographic control of all informational media, as a publisher the ALA at present has less at stake in any sweeping change in the listing and evaluating of newer educational media than most other publishers present. We publish a number of items on newer educational media; some of these were brought to your attention yesterday by Irving Lieberman. We publish, quarterly, a review of films in the *Booklist and Subscription Books Bulletin*. We have published a pamphlet listing films for public libraries. We expect this year to issue a new edition of that list, which will include films for schools, colleges, and universities as well as for public libraries.

We recognize the need for more services evaluating the newer educational media; and, in our new headquarters building on which construction is to begin within a month, there will be space for an audio-visual reviewing room within the Publishing Department. We are not yet prepared to say what those services may be nor when they may begin. I do want to emphasize, however, that we have intentions of increasing our reviewing services. I make these statements for information only, and they should not be taken as having any immediate bearing on the proposal we are here to discuss nor my comments upon it.

All of us, I am sure, are agreed on the importance of disseminating information about films, filmstrips, records, and tapes and upon the need for selective evaluation of them. The ALA recognizes this great need, and I hope this conference will find some ways of meeting it.

In looking at the proposal presented here for bibliographic control and evaluation of the so-called newer educational media, I find myself, reluctantly, in the position of the devil's advocate. A publisher must consider any publishing proposal as one which will eventually be able to support itself—that is, at a minimum it must break even. Even though I represent a so-called non-profit publisher, I do represent a unit within the ALA Headquarters operation that must be self-supporting. While funds may be, and it is evident that some will be, available to subsidize implementation of some parts of this proposal, such funds at best could probably only be considered pump priming. It is highly doubtful that subsidies could be expected to be obtained to keep a flow of information running indefinitely, so such services as can be provided must be expected to become self-sustaining unless they are provided by a government agency. My personal opinion is that whatever is planned or inaugurated should be planned with an eye to the future so that what is initiated can be continued and can be altered in accordance with changing needs.

Publishing consists of at least three operations. The first is compiling the information and preparing the material in a form for reproduction. Most of this bibliographical control proposal is concerned with that operation. A second is converting the item you wish to reproduce into some form for distribution; that is, manufacturing copies of it. A third is distributing it; getting it to the final consumer, and this includes promotion of its sale, filling and shipping orders, and collecting payment for the item sold. Many people, I find, consider publishing as only the second operation—manufacturing or printing. The proposal, parts I, II, and III, represents a minimum of three separate publishing proposals, each of which is a major publishing operation, a major financial venture requiring considerable venture capital and a major financial risk. It could be argued that No. III is less so than No. I and No. II, and with this I could not disagree, but even a monthly bulletin could be no small venture if it covers the entire area. As a matter of fact, I believe proposals No. I and No. II are not two publishing proposals or services but as many as 18, 16, 20, or an indefinite number depending upon the number of items, the media to be covered, and the listing, bibliographically and otherwise, evaluating and cataloging services to be provided for each.

Let us look at part I, a national catalog for the newer educational media. It is proposed that one tool do these things for at least four different media (and I ask again the question I asked last night—why a catalog covering all four media when the emphasis in discussion has been on films?) This national catalog proposes that it will list for four media all items which are available in the United States and provide for each item (1) complete bibliographic information, (2) descriptive annotations, (3) recommended grade levels, and (4) subject headings. I note there is no mention of price and I wonder why. At least one of yesterday's speakers noted the need for this information. Although not specifically stated, it is further implied that this service, the national catalog, should be provided in book form in a basic catalog, and in monthly supplements, annual accumulations, and five-year accumulations. It further proposes that each of the minimum of four media listed be fully indexed by author and subject and that a combined subject index to all media be provided. Any publisher will tell you that any index adds to cost and that combined indexes and accumulated indexes also add to cost.

In addition, this proposal includes a card service for all titles for all media. This alone is a publishing venture of no small magnitude.

The proposal implies a demand for cards for all titles. There is only one agency now that endeavors to supply cards for most books and that is the Library of Congress. I doubt any other agency could consider such a venture, and I believe most publishers would have to think many times about initiating a selective card service that would supply cards for a major portion of the items available.

Part I, then, in my opinion, is more than a national catalog even when you allow for its covering four different media. Since we do not know how many items are involved, we cannot estimate what the probable size of the basic volume and the annual accumulations would be. At a minimum a basic catalog would undoubtedly be as large as the two Library of Congress lists combined. Insofar as I have been able to ascertain, because of the amount of material included per title, the proposed national catalog could not be handled by the newer devices for reproducing bibliographies by means of punch cards and photographic equipment. Even if it were possible as new equipment develops to reproduce such a catalog, a very real question remains as to whether the machine method would not cost more than the traditional hand method.

All of this information in this basic catalog and its supplements is to be made available at a nominal cost. What a nominal cost would be is not indicated, but, of this I am certain, what is a nominal sales price to a publisher has little likelihood of being considered a nominal cost to a purchaser. I am equally confident that neither would consider the price for all of part I a nominal one. I seriously question that a national catalog as proposed could be in a price range that every school district could buy. As a matter of fact, I question whether each school district would purchase it even at a considerably lower price. If I may illustrate, Textbooks in Print is available from R. R. Bowker and Co. annually at $2. In 1958 they claimed a distribution of 17,000 copies. I had the opportunity of asking Dan Melcher last night if the distribution had increased and he said it is now about 22,000 copies. This figure is half of the 44,000 school districts noted.

The proposal embodied in part II, Guides to Selected Newer Educational Media, hinges on factors not defined within it; namely; how many catalogs or lists and what types of subjects, grade levels, both or combinations, are involved. We are again handicapped here by lack of accurate information on how many items are involved in the four media. Appraising these unknown number of entires in an unknown number of selected guides using model four within the proposal (a detailed one-page appraisal) represents a tremendous amount of labor, voluntary or otherwise, and a lot of publishing. In fact appraising at only one level or in only one subject area could be no small task. Evaluation before final selection alone can be a major job assuming that it is to be selective evaluation and not an appraisal of every item. Preparing an appraisal of items selected is another major job. Publication of such lengthy reviews precludes use of any now available newer card and photographic devices such as used in the Index Medicus, Textbooks in Print, etc. Offset printing, while it does in many instances reduce costs, is not necessarily always an inexpensive means of publication and at best reduces but does not eliminate one of four or five costs in manufacturing.

Preparation of selective guides by representatives of national educational and professional associations has many virtues, but it also has many drawbacks. Voluntary expert assistance is valuable and its value should not be underestimated. It was pointed out last night the need for the high intellectual quality of the appraisal of this material. There is, however, little likelihood that such voluntary help could be obtained without machinery more or less cumbersome that takes considerable time and considerable expense. I believe the proposal for such evaluation needs considerable more exploration. In fact I raise the question as to whether any exploration has been made with the various educational and professional organizations as to their interest in such a plan for bibliographic control or evaluation. The American Library Association has done such cooperative reviewing for more than fifty years, and it is doing so now in three different ways. I am aware of the shortcomings and the benefits of each. I would be glad to answer questions later or to discuss further the cooperative reviewing we do. But cooperative reviewing and selecting is not always successful. I know one selective guide which has been in process since 1942. Although several thousand pages of manuscript have been compiled there seems to be little likelihood that it will ever be published.

I will make no comment on part III of the proposal, A Newer Educational Media Bulletin, basically because it is not part of bibliographic control.

I will not comment upon the budget except to say that I think it is incomplete and unrealistic and to express my belief that it could not be otherwise until what is to be done, how much, and in what length of time is determined.

I would like to make one comment, however, on the statement that proposes an evaluation be made after the first year. It has been the experience of the American Library Association, which has done many projects with many groups and foundations, that it is difficult to make any kind of an evaluation at the end of the first year. I would expect that it would take at least two years to make the initial start on this proposal and no evaluation should be attempted until there are measurable results.

Now having taken the position of the devil's advocate, I would like to make comments and suggestions and raise some questions of a more constructive nature. I do not disagree with Mr. Shaw's comment last night that we should not look at books and where we have been but that we should start where we are now and benefit from what we have learned about bibliographic control of books. But it could well be pointed out here that though we have national catalogs for some of the older educational media—namely books—we do not have descriptions of each, nor evaluations of each, nor selective guides to all areas. Users of books repeatedly comment upon incompleteness of coverage in reviews of books published annually and a lack of critical evaluation of titles. Although an annual list of textbooks in print is available, there is not, insofar as I have been able to discover, any complete or partial systematic evaluation of textbooks. Throughout this proposal there is repeated emphasis upon the need for cross-media indexing, but there is no reference to the need for relating the newer media to text and trade books. As a librarian and former teacher, I still believe that books remain an important means of education and that using newer media and books will remain the basic teaching method. Perhaps within this group such a statement is heresy.

There are two areas in which information is not supplied in this proposal, both of which are necessary to any serious consideration of implementation of parts I and II. These are, first, the approximate number of items in print in each media and the number produced each year, and secondly, and most important, what cooperation will producers and distributors give to any plan for bibliographical control. To me the cooperation of producers and distributors is a major consideration and needs full exploration before any implementation can be attempted. Mr. Shaw said last night he thought this could be taken for granted. I have been informed by publishers working with listing the newer media that they are not receiving the cooperation of many producers and I point out that representatives of all media are not present at this conference.

If progress is to be made toward the solution of the problem of dissemination of information about what is available and what is published and could be evaluated, do we not need to determine what is most needed, for whom, why, and for what use, and then determine who will meet those needs and how?

REACTIONS OF A PUBLISHER (AUDIO CARDALOG) CONCERNING THE PROPOSAL FOR A NATIONAL BIBLIOGRAPHIC CONTROL SYSTEM FOR NEWER EDUCATIONAL MEDIA

Max U. Bildersee

We have all long recognized and each of us here has attempted to do something constructive about the need for the widest possible dissemination of information to teachers about newer media and about older media. It is obvious to all of us that the need in the areas called audio-visual is no greater than the need in other communications areas.

So, we must immediately ask whether the project as outlined does not undesirably overemphasize certain areas—areas in which we all have deep personal interests—but albeit shallower than our professional interests and our mutual convictions concerning the fundamental importance of education in a democracy.

Would it not, then, be much more pertinent and significant to direct our study to the general idea of devising appropriate means for disseminating information to teachers concerning the gamut of educational communications materials?

Undoubtedly the textbook is the prime duplicated and dispersed communications device in use in modern education. And as education is practised today and will surely continue to be practised in the foreseeable future, the textbook will remain central.

It therefore seems incomplete to limit our proposal to the comparatively small area of what we call newer educational media. Any effort at creating a single meaningful and significant bibliographic device to broaden teacher knowledge must embrace not only films, filmstrips, recordings, broadcasts and telecasts but also must embrace textbooks, pamphlets, periodical literature, maps and charts and any and all other duplicated and dispersed instructional materials.

I have no intent thus summarily to dismiss broadcast media or in any way to belittle their influence and significance. But their problems are the problems of all and are therefore fundamental to every facet of this discussion.

You and I, when we serve as teachers, rely on a variety of media including those in the area of our specialization. We must anticipate that those we educate as teachers will follow both the example we set for them and the precepts we present to them.

The researchers report that, in some measure, the particular services which they propose be established are already available through a variety of sources.

In their offering, first, there are suggested card entry forms for the proposed new catalog. These are based on models adapted from Library of Congress catalogs. Unless the Library of Congress discontinues their current catalog activities involving the three areas illustrated--motion pictures, filmstrips and recordings, we may find ourselves condoning rather than condemning unwanted, unnecessary and costly duplication.

Is it not more logical to expand Library of Congress facilities and activities, perhaps through NDEA funds, so that, combined with existing information about printed documents, these three newer media can be more adequately served? There is reason why this should be further developed and expanded to serve other presentations including pre-recorded, or off-the-air recorded, broadcasts and telecasts. The former, of course, should then be treated in the same manner as are other sound recordings and the latter in the same manner as are other soundsight recordings--films. The Library of Congress activities in this area should be and indeed must be expanded.

Critical appraisal is another matter entirely. The examples provided in the proposal dealing with science are undoubtedly valuable to the schools in Indiana. I am confident that they are carefully studied and well used in Indiana. But if my experience with existing inter-state jealousies is any indication, they will find limited acceptance beyond the Indiana borders. With all respect and admiration for this service, I would emphasize that parallel services have been made available by the New York State Education Department in a somewhat different form to all of the schools of New York State for many years and that they have covered aspects of the film, filmstrip and recordings media.

They have been nationally available and have not known significant national acceptance. I feel confident in predicting that a form of duplication will here be involved and that public funds will be spent in parallel projects. My experience emphasizes that a majority of states will not willingly accept the determinations of any body in the area of criticism and officially distribute these statements as valid and reliable.

Please understand that I am not questioning the validity or contribution of what has been done here in Indiana, or of what has been done in New York, or in Virginia, or in Mississippi, or in other states for their own use. I am questioning the national acceptance of such a program undertaken under the auspices of any one state department of education or any other state institution or--for that matter--any national institution at the instant that appraisal, utilization and grade determination enter consideration.

The critic has special functions in this situation; and his work should be encouraged, not delimited. There cannot be real doubt that the critical appraisal of books in public prints has added to sales, to reading and to educated reader discrimination. There cannot be any doubt that critical appraisal of films and records has added to sales, to viewing and listening and to utilization.

Certainly film reviews prepared for and published by a variety of organizations and magazines have been instrumental in the development of finer instructional films and in the wider instructional use of these films. Similarly, in the area of filmstrips, thoughtful critical appraisal, widely dispersed in public prints, has been a plus factor in the growth of this medium. And in recordings, too, we have every reason to believe that the function of the critic is important and that reviews appearing in many publications have added to the sales of such records, the instructional application of such records and finally to the quality of the recordings produced.

Criticism of instructional materials must remain a function wholly divorced from government and from hint of government support. Criticism should not be financed by government. It should be endorsed in principle by government.

The reasons are obvious. We all recognize that criticism, when sponsored by government, has a tendency to take on a distorted OFFICIAL or HALO proportion to those receiving and studying it.

On the other hand, so long as criticism remains an exclusive function of private enterprise it is viewed and evaluated in its proper perspective--as a free expression of opinion.

Criticism--NO!

Library of Congress cards--YES!--because they represent fundamental information without opinion expression and can be nationally circulated.

Therein the beginnings of a cross-media directory already exist. These operations should be expanded to serve the national scene. The efforts of the Library of Congress should be multiplied and publicized so that this superior service can be more nearly current and available to all teachers and other interested groups at minimum cost.

IF a single repository of information is urgently needed, *this* should be the legislated function of the largest overall agency, the federal government. That agency should use the existing dispersal channels, the Library of Congress, and encourage it to take vigorous steps to provide fundamental information on a national scale to and for teachers.

If national dissemination of information to teachers in this or parallel form is not adequate, then each of the states and major cities will probably be forced to do this locally to meet demanded service. There is herein the potential of useful duplication fifty times over to serve diverse local situations.

What steps should this national or the several state agencies take? Each should develop a current information source concerning the materials of all producers, big and small, and of all publishers, big and small. The service should be publicized--well publicized, and individual teachers as well as groups should be encouraged to establish and maintain contact therewith.

Without recommending any source of criticism to teachers, the national and/or the several state information depositories should be prepared to supply teachers with full information concerning the sources of critical review.

The depository should plan to prepare and to supply complete lists of all types and varieties of instructional materials by grade level, or difficulty level, and subject matter. These can be locally edited from master national lists to fit local needs.

These lists should be offered in limited editions and be subject to regular and constant periodic updating. In this way the teacher of a given subject should be able to secure revised current listings of materials from a central state or city source, and the listing should indicate where appraisals can be found and consulted.

The existing and to-be-established critical publications can be widely consulted. Through this device there will be added encouragement to risk capital to enter audiovisual production and to expand existing operations.

Then it becomes a major responsibility of the variety of professional journals on the national, state and local levels to widely publicise the limited official action and the variety of sources of criticism available to teachers. Growth in readership and change in readership demand that readers be constantly and repeatedly informed concerning the variety of informative and evaluative services available to them, and teachers should be encouraged to know and to use them.

As an editor and as a columnist, my responsibilities under such a program and my challenge from producers and from teachers will be multiplied many times over as; first, more materials are widely publicized and used and, second, as new organs of critical appraisal are made available through the democratic processes which involve individual risk.

REACTIONS OF THE DEPARTMENT OF AUDIO-VISUAL INSTRUCTION, NEA, CONCERNING THE PROPOSAL FOR A NATIONAL BIBLIOGRAPHIC CONTROL SYSTEM FOR NEWER EDUCATIONAL MEDIA

Anna L. Hyer

First I want to disqualify myself as an expert. I have never directed a city or county audio-visual program and my responsibilities at the university level never included ones directly bearing on the needs for and methods of bibliographic control of the newer educational media. DAVI is only a minor publisher of bibliographic and evaluative information for reasons I do not need to go into here. We print a little such information in Audiovisual Instruction and occasionally release special listings, usually in relation to some special project of the NEA or its Departments (e.g., "Motion Pictures on Higher Education" and "Motion Pictures on Juvenile Delinquency," published last year). My reactions, as you can see, will be influenced more by hearsay than by personal experience and everyone knows this is not considered very valid evidence!

In my opinion we should not start with what we feel to be merely "helpful and practical" recommendations, but rather should proceed somewhat as follows:

1. Agree fairly specifically what the needs are now and will become in the foreseeable future
2. Establish priorities among these needs
3. Define the procedures which will meet the needs
4. Estimate the budget required for each
5. Reconcile, to the extent necessary, the desired goals with practical problems such as budget.

These are a few of the things which I think I am seeing and hearing from the field which have a bearing on the needs to be met:

1. There is increased interest in what we are calling a cross-media approach to teaching. There are no bibliographic references for some of the media and no major cross-media index available. This is a major deterrent to wider use of the cross-media approach in teaching.

2. As the number of available materials increases, the problems related to previewing and selection, both for purchase and for use, will become staggering for both producers and users.

3. Most of the bibliographic sources provide inadequate content information on materials. Better information would reduce the amount of previewing necessary.

4. In library after library, audio-visual center after center, the same work is being duplicated in the collection of bibliographic information, the preparation of catalogs and related activities. This represents a tremendous waste of time and money throughout the United States. It should be possible to purchase services from a central source that would considerably reduce these expenditures. Some of the larger cities are streamlining their procedures by use of IBM equipment and the offset printing of catalogs directly from bibliographic cards. Before more cities set up their own systems it would be well to attempt some standardized procedures.

5. Since the needs of teachers and students vary greatly from class to class and the curriculum and educational goals vary from school system to school system, evaluation of media is chiefly a local problem. School systems use national guide services but rely in the final analysis on their own judgements, and especially those of local subject-matter specialists.

6. Although many bibliographies and evaluative services are available, no one or any combination of the ones available completely meets the needs at the present time.

With these background statements in mind, I would like to quickly react to each of the three proposed services.

I. Catalog Service

a. "A national descriptive catalog service covering the newer educational media by individual type and collectively by type on a cross-media basis is needed," available both in book and card form.

b. The service should provide more detailed and accurate synopses of content than are now usually available.

c. The present quantity of materials to be cataloged is very large, and can be expected to expand tremendously in the future. Therefore, any system planned to handle the bibliographic control of the newer educational media should make use of the newer methods of data processing.

d. Field testing should be undertaken before any system is finalized.

e. The system should provide for purchase by schools, school systems, colleges, etc., of services which can provide more rapid and inexpensive bibliographic control and catalog preparation at local levels.

f. The project must be so staffed and equipped that there is little time lag between the release of materials and the issuing of bibliographical information.
The project should start with materials available at the present and work both forward as new materials are released and backwards to pick up previously released materials (at least for some determined period, say 5-10 years).

g. The service should be widely advertised and promoted.

h. The major customers would probably be libraries, audio-visual centers, schools and school systems; I do not see the service as being of primary interest to individual teachers.

i. The project cannot be expected to finance itself for a considerable numbers of years and should be undertaken with the knowledge that it will need to be heavily subsidized. (The budget suggested in the proposal, in my opinion, is very inadequate.)

j. The national catalog service should be administered by an independent agency rather than through the extension of one of the several agencies presently in the field.

II. Critical Analyses and Appraisals

I question very much the advisability of nationally issued appraisals. At least I consider this a second priority. Local school districts still wish to make their own final appraisals, making use of resources available from many sources. I believe that a good national bibliographical service with more adequate synopses of content would encourage better and more extensive appraisals on a commercial basis. School systems would be able to develop at low cost subject and/or grade level lists based on the materials available in their own libraries. If and when evaluative listings are undertaken at a national level, these should be done by subject matter specialists chiefly, rather than by media specialists, although I would, of course, hope that some media specialists would be involved in such subject-matter committees.

III. Information Bulletin

> I would give third priority to the suggestion that a newer educational media bulletin be published. It seems to me that we have sufficient publications in the media field, each reaching a fairly specialized audience. News releases from the national cataloging service to the major publications in the new media field should be able to handle needed information dissemination without the setting up of a new publication.

Since this conference was announced I have had correspondence from a number of individuals with comments and suggestions on the May 14 proposal. Many of these have come from business members of DAVI. With the permission of Anne Cotter, President of Filmscope, I am attaching a portion of one of her letters because I believe that in rather concise fashion she has put forth some interesting ideas and she will not be here herself to express them.*

In summary, let me say that I favor putting all our resources and efforts into the first of the three services recommended in the Rufsvold-Guss proposal and tabling, at least for the present, recommended services II and III. I further recommend that we revise and expand the concept of service I. I hope I have not appeared negative in my attempt to briefly set forth my present thinking and I would like to reserve a woman's privilege of changing her mind as I listen to the reports of others and the subsequent discussions.

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* The editors are including in an appendix to this report Anne Cotter's complete letter to one of the investigators inasmuch as copies of the letter were available for distribution at the Conference and the information is identical.

REACTIONS OF THE EDUCATIONAL FILM LIBRARY ASSOCIATION CONCERNING THE PROPOSAL FOR A NATIONAL BIBLIOGRAPHIC CONTROL SYSTEM FOR NEWER EDUCATIONAL MEDIA

Emily S. Jones

The Educational Film Library Association is unique among the audio-visual associations in that it represents all those using 16mm films, regardless of subject area, age level, or purpose. Schools, colleges, universities, public libraries, and other types of educational institutions make up the bulk of the membership, but also included are church organizations, labor groups, business and industry, youth serving and community organizations, government departments, health groups, and film producers and distributors of all kinds. In addition to its regular services to members, EFLA finds itself being asked for information and advice by individuals and organizations including, among others, the Government of Egypt, Consumers Union, and the Christian Science Monitor.

Basically, what EFLA provides enthusiastically for its members and reluctantly for non-members is information about films and filmstrips. That this information is needed is shown by the number of letters and phone calls which continually arrive in the EFLA office. Some of the inquiries are from people who don't know what standard reference sources are available, or don't know how to use the ones they have. Others come from people who have exhausted the resources available and hope that someone, somewhere, can provide the information they need.

What are the questions which are asked? The most common question is "What films are there on - - -?" The subject may be bee-keeping, education for the handicapped, atomic energy, juvenile delinquency, planning school buildings, the habits of Eskimos, or the geography of the Congo. Once this question is answered, the immediate sequel is, "Which is the best one for my group?" and the third one is, "Where can I get it?"

The second most asked group of questions centers around a particular film. The asker knows the title (or an approximation of the title) and may even have seen the film at some time. What he wants to know is the details about it—who produced it, how old it is, how long it is, how much does it cost, and, of course, where he can get it.

Since EFLA is a membership organization, it ought not to spend its time and the members' money on providing information for non-members, but it is difficult, if not impossible, to refuse help which is really needed. Members receive regularly information about new films, critical evaluations of current titles, compilations of critical reviews which have appeared in other publications, selected film lists, suggestions for programming, and other information about films and filmstrips. Since the EFLA Evaluations are printed in 3x5 card form, and the back numbers are kept in print, it is possible for any member to have a complete file of the more than 4200 evaluations which have been issued since 1948. But of course this only scratches the surface of the total films issued, and does not touch filmstrips or recordings. Recently, EFLA has sponsored the American Film Festival, and has issued an annual booklet containing full descriptions of the films and filmstrips selected for showing at each Festival. This provides a guide to about 300 of the better titles issued each year, but is again only partial coverage of the material released.

In its basic file of film information, in addition to its own publications, EFLA maintains current issues of the Wilson guides to films and filmstrips, a complete title file of the L.C. cards for 16mm films, the Educational Screen Blue Book, the Educators Progress Service guides to free materials, the catalog of U.S. Government films, the Audio-Visual Resource Guide of the National Council of Churches; and files of producers and distributors catalogs, regional and state film library catalogs, and a subject file of selected film lists. From this array of books, cards, and catalogs, most questions (but not all) can be answered, providing the staff has time to search out the information.

What do we at EFLA think the ideal catalog should contain? It should be organized on a cross-media basis. The potential user should be given information on all the av material on his subject, so that he can choose the title and medium best suited to his particular purpose. The AVRG put out by the National Council of Churches is a good example of a cross-media catalog with summaries and evaluations of films, filmstrips, and recordings arranged by title with an index by subject.

A major requirement, and the most difficult one to achieve, is that the catalog should be complete, up-to-date, and accurate. Efforts should be made to obtain information on items not now listed in the Wilson guides or other standard catalogs—on material which is or could be made available from industry, radio and television, medical and advanced science research projects, government agencies both national and local, and private sources. Undoubtedly a great deal of valuable resource material is in existence which is not used at present because nobody knows how to get it. Supplements should be issued once the basic catalog is collected, and the whole catalog should be revised fairly often to eliminate items no longer available and to put new materials where they belong, instead of making it necessary to plow through four bound books and six paper bound supplements to check the existence of one title.

Because of the kind of requests we get at EFLA, and kind of use we make of references, we would prefer to have the major listing under subject, with a complete alphabetical title index for cross-reference. Our preference, based on our experience, is for something similar to Dewey subject headings, rather than curriculum areas, which differ from one school system to another, and with changing trends in nomenclature. Also curriculum headings are too broad to be very helpful—social studies covers a multitude of widely varied topics, and is not much help to the person who wants a film on the duties of a policeman. Of course, full cross references on subject would be necessary, since many films and other av materials cover more than one subject.

The listing for each film, filmstrip, or recording should be standardized, complete, brief, and easily understandable without too much recourse to a glossary. The source can be given as in Wilson—with a readily recognizable abbreviation for the main source, and a directory of addresses in a separate section. Addresses are essential—the L.C. argument that sources change too often to be worth listing is only valid for a permanent reference or archive listing. For a catalog which will be revised regularly, it is essential to print full current addresses. It is even possible that the post office will forward mail if the producer moves before the next supplement is printed.

A synopsis of content is important, and it should be based on the actual content and structure of the film, filmstrip, or recording. A producer's statement of what the film is supposed to accomplish is not the same thing, and is frequently misleading. The synopsis can be quite brief in many cases, but the phrasing of it is very important, since in many cases it will be copied by local film libraries and av centers in making up their own catalogs, as well as being the chief guide for many film users.

An important part of the description should be some designation of proficiency level. The present listing in Wilson and many other catalogs, according to school grade as indicated by the producer, is very vague, since the producer naturally wants the widest possible use for his film or filmstrip, and stretches its scope to its limit. It is difficult to suggest just how this level should be indicated, but particularly if audio-visual materials are to be used widely on the college level, a better method than the present one must be found.

A major consideration is the format in which the catalog is to be issued. There is no question that the information must be accumulated and arranged on cards, whether these are punch cards for an IBM machine, or ordinary typed file cards. But how should the catalog be put into the hands of its ultimate users? On cards? notebook sized sheets? One large (very large) bound book like the Cumulative Book Index? A two-volume set, one for title and source lists, the other for subject listings, like Books in Print? A series of paper bound pamphlets on each subject, like the University of Illinois film catalog? This is a point which must be discussed in detail, with consideration of such mundane points as comparative costs. But the big thing to remember is that the catalog must be in a format which is easily used by classroom teachers, school librarians, recreation leaders, group directors, and the chairman of the program committee. If possible, it should be reasonably attractive, or at least not absolutely forbidding in aspect. The arrangement should be clear, and nearly self-explanatory. The instructions for use should be written in ordinary readable English, without any educational or governmental gobbledygook. (Perhaps Edgar Dale should be drafted to write them.)

EFLA is strong for 3x5 cards—and uses them for its own Evaluations, as well as for many kinds of office references. But our experience indicates that cards are fine, in fact ideal, only for a center where there is a trained and responsible person to file in new cards, remove out-dated ones, make corrections as necessary, and see that the cards stay in their proper order. The sheer bulk of 50,000 cards makes it impractical for use anywhere except in an av center or catalog room, and has been a strong factor in cutting down on the use made of the L.C. cards for films. If the use of av materials is to spread to the common man—i.e., the person who has never taken a course in audio-visual materials and methods, or in library cataloging—then the basic catalog must be in a more compact and handy form. "Handy" is used here literally—the catalog must come readily to hand, and be something less in weight than Webster's Unabridged. This seems to indicate the two-volume or multi-volume format suggested above. Naturally the print will have to be kept fairly small, but let us remember that not all potential film viewers or recording listeners have 20/20 vision. Putting the material on microfilm or other means requiring magnification simply puts another barrier in the way of the user.

Assuming that it is decided that the national catalog should be prepared, and that funds are available to make it possible, how would one go about tackling the enormous task? Undoubtedly everyone here has his own ideas on the subject, and we may all change our minds during the course of the conference, but as of this moment, here are my ideas on the subject of procedure.

An advisory committee working with EMC, USOE, or whatever the sponsoring body may be, would supervise the project, which would be carried out by a Project Director and staff working either directly under the sponsoring body, or within one of the EMC constituent members. The first step would be to accumulate as much as possible of the basic information and put it on file cards. Letters to all producers and distributors would ask for their latest catalogs, existing references and files would be combed, and their entries (with duplications removed) checked for current accuracy. Search would be made for obscure and elusive items. As each title was checked off for "information complete", its data would be typed on an electric typewriter with carbon ribbon in the agreed format onto a special card, which would be sprayed for protection. These cards would be accumulated and arranged within the form decided by the advisory committee. Then the cards would be taken from their file, fitted into the specially prepared forms, and photographed for each page of the catalog, which would then be printed by offset in any desired reduction of size. The cards would be returned to the permanent file, and kept until time for the next revision when they could be used again (unless changes made it necessary to retype the card) together with new cards for newly released material. This is basically the system used in printing the annual Books in Print at R. R. Bowker Company, and the film library catalog of the University of Wisconsin. It is inexpensive, infinitely variable, and requires a minimum of expensive equipment to get started. Revisions are easy and do not require complete re-setting of type or remaking of forms. Ordinary typists can prepare the cards, and no special skill is required to arrange the cards in the form for photographing. The same office which supervises the collection and preparation of material for the original catalog can continue to do supplements and revisions with a minimum of staff and equipment.

This system is suggested simply for producing a catalog of existing av materials, in an inexpensive and usable format. It is not the answer to the need for a real union catalog, which will probably require the information-retrieval type of electronic equipment. A union catalog would be wonderful, if it can be financed. But right now what we need is a practical, easy-to-use catalog, which should be ready, at least in preliminary form, by the fall of 1962. That doesn't leave much time.

Obviously, EFLA is interested in the question of an av catalog. We need it in our own office. Our members need it in theirs. The non-members we inadvertently serve need it even more. And we'd like a hand in its preparation. But whoever does it, and however it's done, we'd like to see this group take advantage of a unique opportunity—to plan the perfect catalog, and in producing the necessarily imperfect result, to aim always at making it better—at increasing the use of all audio-visual materials through providing better information about them.

REACTIONS OF A PUBLISHER (EDUCATIONAL SCREEN AND BLUE BOOK) CONCERNING THE PROPOSAL FOR A NATIONAL BIBLIOGRAPHIC CONTROL SYSTEM FOR NEWER EDUCATIONAL MEDIA

Paul C. Reed

You will note from the agenda that I am now supposed to be commenting about this proposal from the point of view of the EDUCATIONAL SCREEN MAGAZINE and its special BLUEBOOK ISSUE that is put out each summer. You may also have noticed that on the list of participants of this conference I am listed as the Director of Instructional Materials for the Rochester, New York, Public Schools.

It is true that I am privileged to work with both of these organizations and, necessarily, any comments that I make must be made in terms of my experience with both of these organizations. I doubt very much if there is any conflict involved between my point of view as an Editor of a magazine and directing the Instructional Materials Program for the school system. In fact I have found that my effectiveness in each of these positions has been greatly strengthened by my work in the other.

First, I should like to strongly reinforce all that has been said about the need for more complete and more accurate information about the various instructional materials that are available for school use. The selection of all instructional materials in Rochester is carried through by committees of classroom teachers, and one of my primary responsibilities is locating and securing the materials for these committees to evaluate. This effort is severely handicapped by the fact that there are no reliable and convenient complete sources of information concerning the materials that have been produced. Even after diligent searching, we can never be sure that we have secured and reviewed the best materials that have been produced and what I am saying applies to textbooks, as well as non-book instructional materials.

Before reacting specifically to Parts I, II, and III of the proposal, I should like to make two generalized comments—first, with regard to the teacher's role as the consumer of the information that is being proposed. I think it will be a mistake if it is considered that the card catalog information is being prepared primarily for the teacher as the ultimate consumer. In all but the remaining one room schoolhouses, teachers are members of school faculties; and, for the most part, schools are part of a school district system. Even though the teacher is the ultimate consumer, of instructional materials, the one who is to use them, the individual teacher does not have the basic responsibility for locating and securing instructional materials to use in the classroom.

Even though classroom teachers do have a voice in this process, it is basically a responsibility of various school administrators. Therefore, these administrators, rather than teachers, should be considered the consumers of the information that is proposed.

The second general consideration is in regard to the word "availability." I believe that the whole project can be put into better perspective and proper dimensions if first consideration is given only to those materials that are "readily available." From my point of view a motion picture, for instance, is readily available if prints can be purchased through normal channels. If a film is loaned free, it is readily available if it may be borrowed and obtained reasonably close to the time when it is needed. In other words, an educational film produced by an individual for his own use without any intention of selling it should not be considered to be readily available even if the producer is willing to sell prints through a laboratory. Likewise, a free film for which there are only two or three prints would not by my definition be "readily available."

Now I should like to comment specifically on Parts I, II, and III of the proposal. I can agree wholeheartedly with the need for Part I—National Catalog of Newer Educational Media. From the point of view of my interest in the Rochester School System I would like to see this catalog include all materials of instruction. Why not include maps and globes? One has to search through all the map publishers' catalogs just to find out what different maps of the United States are available and even then he cannot be sure what is included on these maps. For textbooks there is the very useful publication entitled "Textbooks in Print" produced by the Bowker Company, but this includes no annotated information whatsoever. So I would favor increasing the scope of the National Catalog to include all instructional material. In regard to the frequency of publication, it might be that yearly supplements would prove to be more practical than monthly supplements for this catalog.

With regard to Part II—Guides to Selected Newer Educational Media—there seem to be two parts, and my reactions differ on these two parts. First, I do see the need for lists of instructional materials by subject and by grade level, but it seems to me that this part of the proposal belongs with I—the National Catalog—and these are very much needed. The second section of Part II is List With Critical Appraisals. If there is a centralized service to be performed here, the need, as I see it, is for stimulating more critical appraisals by many and varied groups and for collecting these appraisals in some systematic way. Then, rather than setting up new media and channels for the distribution of these appraisals, every effort should be made to assist the existing channels for the distribution of appraisal information.

I note on page 25 of the proposal that "there was general agreement among the authorities concerning the need for Part III" whereas the need for Parts I and II were questioned by authorities. My disagreement with some of these authorities disturbs me a little because I feel there is no evidence of need for a new information bulletin about newer educational media. Least attention is given in the proposal as to what would be included in this bulletin and how it would differ from or supplement the existing sources of information.

You probably will discount this point of view because of my connection with EDUCATIONAL SCREEN. You will think that I am concerned with the fact that such a bulletin might represent one more competitor for the magazine. The fact is that I am probably less concerned about this than I should be. EDUCATIONAL SCREEN MAGAZINE has an unusual record of being able to meet all competition, and there's been plenty of it since 1922. Altogether there have now been 390 issues published, and, during that period, the magazine has successfully absorbed and taken over responsibilities from, oh, a dozen magazines that have chosen to cease publication.

No, I think my greater concern is for the competition for my time as Director of Instructional Materials in Rochester. In the past thirty years, I have read all the information that normally flows over the desk of a person responsible for an audio-visual program in a school system, and I have actively sought out all of the printed information about this field that I could find. At the present time I believe there is an adequate flow of information through the existing periodicals about "educational radio and television, as well as other educational media, as it relates to school use." I can't think of any information about newer media that could be published in a new information bulletin that isn't now being published or that could be published in existing publications.

REACTIONS OF A PUBLISHER (EDUCATORS PROGRESS SERVICE) CONCERNING THE PROPOSAL FOR A NATIONAL BIBLIOGRAPHIC CONTROL SYSTEM FOR NEWER EDUCATIONAL MEDIA

Arthur P. Horkheimer

Members of the Panel:

I should like to open my portion of this discussion by reading to you a letter from one of our editors, Dr. Walter A. Wittich of the University of Wisconsin.

September 29, 1960

Mr. A. P. Horkheimer, Publisher
Educators Progress Service
Randolph, Wisconsin

Dear Horky:

I have studied the NDEA proposal very carefully and I think there are some parts very worthwhile but there are some that I feel should be changed or eliminated.

The idea of continuing the kind of indexing control which is currently being produced by the Wilson Company and the Library of Congress, I feel, is highly desirable. There must be some means of systematically recording the production and content of new A-V material. I believe that EFLA would be very efficient in conducting this kind of service.

I am very much opposed to the portion of the project which sets up the means for evaluating and making judgments of all the materials that exist. I believe that constitutes, or approaches, a form of censorship which no one central agency should be permitted. Personally, I do not believe that the U S Office would support such a plan.

I do feel that a research investigation should be undertaken through which a cross-media listing of all existing A-V materials should be studied.

I believe that a plan could be worked out whereby teams of teachers and supervisors could study existing A-V media and make proposals in terms of curriculum and materials planning.

Actually, Horky, you have done this in the Science Guide. Here you have taken the field of science and organized all the free films, filmstrips, charts, etc., which are available in the field of science.

You have demonstrated that you can finance this kind of service whereas the Wilson Company is considering withdrawing their services, I presume, because of financial reasons.

I can envision U S Office support to a plan for investigating the outlets of existing A-V materials, subject by subject, grade level by grade level as to utilization, in coordinating the existing materials much as you have done with the Science Guide.

I believe there are two functions to be served. The first is to continue the EFLA and LC kind of control as it now is, namely, the cataloging of existing materials on cards. The second is to coordinate the efforts of teachers and supervisors as they make judgments and recommendations as to which of the existing materials may be used in cross-media approaches to the several areas of subject content at various grade utilization levels.

The first half of such a project could well be continued by EFLA. The second half of this project is what you have demonstrated your ability to do through the publication of the Science Guide.

I would suggest that you offer to publish and distribute the cross-media material which would be gathered by Carolyn Guss and Margaret Rufsvold as they supervise the efforts of two or three hundred teachers, supervisors, and audio-visual people across the country.

In looking over the recommendations for people to administer this project, I believe that Bertha Landers is well qualified to occupy a key position.

I think that through these means the demonstrated strength of all the people described above could be brought to bear on the task of completing this very ambitious project.

Sincerely,

W. A. Wittich

The Proposal

We are happy to have this whole matter of materials in the area of "newer educational media" explored. In view of the timeliness of things, we feel confident that it will reveal all sorts of things of temporary value, though of merit. More fundamentally, we are hopeful that it will disclose many more things of permanent value, particularly in the way of bringing to light needs for further research that should be done if these newer educational media are to approach their full potential contributions to the overall goals of education today.

Let us make a breakdown of the newer educational media so that we may look at the proposal more closely, piece by piece. We are considering films, filmstrips and tapes primarily and TV and radio less directly. We have three categories namely, films, filmstrips, and tapes, about which I would like to speak at this time. In each of these categories, we have free or sponsored materials as opposed to cost materials. We have, then, in essence, six categories, primarily.

I believe that EPS is doing a good job with the free materials. We have just embarked upon a new concept of cross-media treatment of these materials in our Science Guide. Let me dwell on this for just a moment. At the Kansas City meeting of the NSTA in April, the Business-Industry Section, discussed at great length the proposal of the NSTA that the B-I Section grant $5,000 to make a survey of free science materials. The conclusions of the discussion were that EPS is already doing the job, that job, that any new study would duplicate work already done, and that more could be done with the money in other directions. The outcome was that the NSTA is now working in the direction of consulting with industry in the specific area of developing new charts on basic science concepts and principles as they are applied in given machines used and produced by industry. About 125 science people are working on this project. When this project is completed, they will be ready to develop another and another in areas not already covered by any other organization or group. A side product of the meeting was that EPS, (with the cooperation and guidance of members of the NSTA), came up with the publication of the *Educators Guide to Free Science Materials*. EPS is congizant of the *potential work on a cross-media approach* in many other areas of the curriculum and has plans to proceed in this general direction as rapidly as it can in light of the many, many details to be ironed out at every step of the way.

I would like next to consider cost films. Here we find three types of publications now in existence: (1) the catalog cards of the Library of Congress, (2) the evaluative listings of EFLA and the Landers Film Review Service, and (3) film reviews in such magazines as the *Educational Screen*, *Business Screen*, and other well-known publications. I believe *each of these three types of* services serves a valuable purpose and I believe each of these organizations is doing a good job. I would not like to see any of them discontinued.

I do not mention the Wilson Guides because I understand Wilson is considering discontinuing them. I am sorry to see this happen. While their film and stripfilm guides are very good and serve a genuine need, I do not believe they can be made to carry their own weight financially as a business venture. I will say more about this later.

On cost phonodiscs, I believe that Max Bildersee is doing a fine job with his Audio Cardalog system and his monthly column at the present. Other types of services on phonodiscs may be needed in the future but I feel confident that he will sense the needs for those services if time proves their need.

On cost tapes, or phonotapes as you like to call them, I know that Kent State University is providing a catalog service at the present time. I do not know how good a job they are doing because I have not had sufficient contact with this relatively newer medium to judge. I feel sure, however, that they are in a position to know what is needed and I can see no reason for disturbing that working arrangement at this time.

On filmstrips, I thought Vera Falconer did a good job with her book in 1948 and I was hopeful that what McGraw-Hill billed as a "First Edition" would continue. As with films, I am doubtful that a guide to cost filmstrips can be conducted as a successful business venture on either the Wilson or McGraw-Hill approach. I feel sure that Irene Cypher is doing a fine job of providing reviews and commentary on cost filmstrips in her column.

Considerations

1. I believe, then, that agencies and organizations now working with the newer educational media are doing a job. I believe, too, that when the need for more and new services reaches the point where schools can and will pay for them, private industry will produce the needed services. I agree with Dr. Wittich, and Dr. Fowlkes as well I might add, that the proposal before us by its nature constitutes, or approaches, a type of censorship that is not desirable.

It is, in short, my opinion that a monopolistic, evaluative, single agency is not the answer. It is, conversely, my opinion that existing publishers in private industry have shown daring, ingenuity and courage in meeting the challenges of their profession and that they, therefore, should not be deterred from continuing to push back the frontiers as rapidly as "the trade will bear."

2. I believe that cross-media services, on the general format of the Wilson Guides, can be produced and marketed successfully. I am quite sure that the Wilson and McGraw-Hill publications failed on this score for two resons, namely, (1) the schools were not ready for them, and (2) the distribution of them was not conducive to sufficient sales to justify their production.

I do not believe that the schools were ready for them because too many of the schools were too small to justify the cost or to feel the need for them. What this cross-the-country reorganization of districts will mean in this respect is any one's guess but it is mine that the larger districts will provide budgets and curricular offerings that will work in favor of such publications.

It has been our experience that many of the smaller schools say that their University and their Britannica man and a friend or two who handle other new educational media give them "all the films we can use," or "all the films we need." Additionally, research is leading them to a realization of, and a familiarity with, the essentiality of just these materials.

I said I believe the distribution pattern was not sufficiently conducive to justify the Wilson and Falconer type of services. I do believe that services on the cross-media approach will go far to ease this problem. I believe that the science instructor will use more of these materials if a guide to cost films, filmstrips and tapes is made available for his desk. Similarly, I believe that the social studies teacher will use more of them on this basis. And this goes right down the line.

I believe, further, that these cross-media publications can be made more attractive to the classroom teacher if some effort is made to do what we are doing with our free materials guides, namely, (1) provide some presentation of current implications of the media to the teaching program, and (2) provide some specific suggestions in the direction of "research and experimentation in the utilization," as Title VII defines it, of these newer media, subject by subject and grade level by grade level. Because the purpose for which a medium is used determines its grade level in a given classroom situation, I do not believe materials should be grade-levelled except in light of "utilization." I believe these two policies, handled somewhat like we handled them in the Science Guide, would provide a step in the direction of making the cost guides more capable of becoming self-sustaining from a publishing viewpoint. I believe that cross-media guides to newer cost educational media are needed and that they can be made to carry their own load.

3. I believe the selling price of these guides should be three and one-half to seven times the cost of production; volume is a factor. I believe that salespeople must be used, regardless of what kind of guides are published. I believe that a complete new revision of each guide must be made each year. I do not believe that loose-leaf supplements, whether monthly, or yearly, or every five years, will stand up. I know the history of the encyclopedias I sold, some 4,000 of them. I know the history of similar publications which come to my office every week and month—they never get filed. We tried it in 1936 and 1937 when we started the Index—we revised the Index seven times in that first year. The supplements were not filed and people constantly asked for materials from one issue which were deleted in a subsequent issue but which they did not check. I believe that a minimum potential of 5,000 unit sales on each publication is necessary to justify the heavy editorial and publishing costs required to put out a single edition of any guide. I do not believe that Wilson-Falconer type cost materials guides can be produced commercially on any basis other than on the cross-media basis.

Needed Research

The question then, I suppose, is—what will you do with that $100,000?

In the same way that the NSTA quickly found other more important projects than duplicating much of what was already done, I believe your group can well find many other projects that need doing. Frankly, I am fully convinced, further, that $100,000 won't even make a dent in paying for the proposal before us.

1. We could explore the possibilities of the expansion of the services of EFLA. Can they correlate the "new media" within this area—films, filmstrips, and tapes on a cross-media approach? Can they correlate the "new media" with other existing media—books, flats, slides, etc.? Can they do this on a self-sustaining basis?

2. We could explore the completeness of the coverage of EFLA and LC. How many films are being produced annually now? EB Yearbook says

8,440; Wall Street Journal says 28,000. Who is right? EFLA cannot hope to achieve anything like completeness of coverage of them at 36 a month. Is it possible for them to give more nearly complete coverage? Can they do this on a self-sustaining basis?

3. We could explore the whole problem of criteria of selectivity of existing materials. Much research could well be done to guide publishers of "new media" services. What information should be given to the schools? What information do they need? What will they pay for?

4. We could explore the needs for new materials. Are more films needed, or more filmstrips, or more tapes? Are more of any of these needed in given subject areas or at given grade levels? The NSTA found need for a given item, charts on machines. Science at levels K-6 has received added impetus recently; are more materials needed in this area? We publish a bi-weekly filmstrip service on science news and have a feeling that much more material is needed at the lower elementary level. Are more materials to give life to "science experiences" needed? Industry is constantly seeking to provide schools with materials the schools need. Can you help them?

5. We could explore educational radio and educational TV. To be effective, ETV should be universally available. What can be done about the schools in the outlying areas? Because of the extreme importance of the timeliness of information on these two media, can something be done to provide information on them? Can some sort of TV-radio program review service be developed? Can we encourage and interest A-V or other magazines to include a column in each issue on either or both of these media?

This list is by no means meant to be exhaustive. I have noted only a few research projects that have bothered me from time to time. I am indeed happy to know that you are giving this whole matter of "newer educational media" serious consideration. I am very confident that much good will come out of this meeting and any others that may follow. I feel most fortunate and honored that I have been permitted to sit in on the meeting and to have some small part in it.

REACTIONS OF A PUBLISHER (THE LANDERS FILM REVIEWS) CONCERNING THE PROPOSAL FOR A NATIONAL BIBLIOGRAPHIC CONTROL SYSTEM FOR NEWER EDUCATIONAL MEDIA

Bertha Landers

Madam Chairman, ladies and gentlemen, I have been invited to speak to you on the reactions of publishers of new media to the bibliographical control service under discussion at this conference. But first let me salute Dr. Guss and Dr. Rufsvold for preparing the prospectus and organizing this conference of so many distinguished men and women in the field of communications.

Like my colleagues Dr. Reed of Educational Screen, Mr. Horkheimer of Educators' Progress Service and Max Bildersee of Audio Cardalog, my publication, Landers Film Reviews, is one of the score of privately owned periodicals that try to keep educators abreast of what is available in the A-V field. My monthly publication carries detailed reviews of 16mm educational films available for sale as they are released. Before becoming a publisher I was for many years a teacher and a librarian, and I feel I know something of the needs of educators in this area. Many of you will be interested to know that since I have become a publisher, I find myself closer to the needs of the teacher. Perhaps this is because in my five years of editing a film review magazine I have continuously met with teachers at all grade levels and in all school systems.

To express my reactions to the proposal I should like to examine with you the three points recommended by the investigators:

1. A national catalog which lists and describes the newer media, provides cross-media subject indexes, and is systematically kept up-to-date.

2. Guides to selected newer media: subject and/or grade level lists with cross-media indexes and periodic supplements to keep items up-to-date.

3. A newer educational media bulletin published monthly, for the purpose of disseminating information about the media, particularly educational radio and TV.

Assume for the moment that the recommendations as outlined are realized. What happens to the existing publications? I think this is something we should look at very seriously, for the Educational Screen, Educators' Progress Service and Audio Cardalog represent not only many years of hard work but tremendous outlay of capital. Obviously, I place myself in this group; but the important thing for us at this conference is to know that this feeling goes beyond the few independent owners present here. I have here a letter from one of the largest educational film companies in the country. Let me read you their reaction to the proposal:

> I view with considerable alarm the growing tendency on the part of the government to enter fields in which there are already activities which have demonstrated their ability to support themselves and provide useful service under the existing free enterprise system. Government funds can only grow out of taxes, and the sources of taxes will greatly diminish if the government, in spending these tax derived funds, puts the tax payers out of business! To the extent that it enters publishing fields where independent and self supporting activities are now able to provide needed services, it does exactly that.
>
> I also have the general feeling that there is already in existence a federal framework well able, at least in theory, to handle any so called bibliographic needs in the film field. There is the Library of Congress, which can certainly be broadened to include resources in the film field as well as in the book field. The establishment of any new Bibliographic Control Center, it seems to me, should be weighed carefully against the economic advantages of using resources already available.
>
> There does seem to be a great tendency today to create new institutions and to brush aside useful existing institutions and although this is exciting and stimulating, it is also devilishly expensive and rarely produces much of an improvement.
>
> I am not informed on the details of this project so I can only speculate on what kind of evaluation is going to be applied within the framework of this Bibliographic Control System. Something dangerously close to a national system of censorship could be involved, if anything but the simplest kind of evaluation were applied in the process of assembling a Bibliographic Center. This differs greatly from the sort of thing you are doing--as a qualified individual identifying herself clearly as the author of critical statements with regard to given materials. This is in the real spirit of free exchange of ideas, comments and criticism, and it certainly would wither and die under federal sponsorship. Indeed, I doubt that it would be possible, and it seems to me to be inevitable that in the long run it would attract the lowest type of evaluator. There is a certain similarity, in this kind of activity, to the old grade labeling campaigns, in which the effort to discourage the producer of poor materials tended to reduce the peaks sought for by the producers of good materials.*

It is regrettable that he is not here to assist us in our deliberations. Some may argue that what the proposal has in mind does not compete with the publishers already in the field, because the proposed publications will be so exhaustive that it would be impossible for private capital to meet the costs. Doesn't this compound the problem? It seems to me that it does, because educators will be offered a set of complete bibliographic services in effect produced by the government and, therefore, enjoying the prestige of the government. Are we not asking the government to compete with private enterprise? Aren't we saying to the educators and schools—here is the most complete file on the newer media available? Here is a file prepared under the auspices of the U.S. government. If the A-V director subscribes at a nominal fee to the proposed file, what happens to all the other publications covering these various media? Are we to assume he will want the government sponsored publications and the other existing and well established publications too? Of course not, for the report itself says one of the objects of the new publications is to make it possible to discard the many publications on the market in exchange for these. (See p.8 in the proposal.) I must point out here that some of the business men who have discussed this have been advised that the unfair competition suggested in the proposal is not consistent with Title VII of NDEA, for it is not the general practice of the government to underwrite projects that will kill private industry. I hope that in our deliberations we will find the proper solution to this problem, for I am sure we will all agree that the project must have the support of the business community in order to succeed.

Now as to the proposals I have to make, let me say I think in approaching the question of bibliographic controls, particularly in the area of reviews and evaluations, it should be remembered that these services are not definitive. Teachers do not select films alone; they have specialized assistance from many other sources—curriculum supervisors, professional evaluations in periodicals, film producers' representatives, subject experts, often other colleagues and students. It is the combined judgment after screening the films that any or all of these people decide on the film to be purchased and used in the classroom. I say this to stress the point that there is in my opinion no need for more evaluations, but only need for some efficient system of disseminating information about available evaluations already in existence.

Let me illustrate what I mean. The Library of Congress now publishes a card familiar to all of you but, for our purposes, this card is not complete. The card I have in mind would contain, in addition to what is already on their card, information on existing evaluations, reviews, etc. from the many sources available. This would place on one card the many references for which teachers often search. I know that the proposal indicates that the Library of Congress is reluctant to participate in the project because of what they describe as a lack of space, however, it would seem worth attempting to try to persuade them to reconsider this, particularly since this important information could be added to their cards with very few changes in format. But the success of this suggestion, no matter who carries it out, will depend on the use of machine data processing. To collect in one year the information of over 8,000 films, over 1,000 filmstrips and comparable numbers of the other media—produced in all parts of the country—to collate and then distribute to 135,000 schools is a machine operation.

I would like to quote from page 4 of the proposal: In 1953 UNESCO agreed with earlier opinions that "full use of the world's resources in educational films and filmstrips is hampered by the lack of an efficient system of disseminating information about available materials and by the absence of evaluations." I believe this was certainly true in 1953, but I think since that time the latter circumstances reported in the part of this statement, namely, "the absence of evaluations" has improved greatly—I could name several evaluation services that have come into existence since 1953. I feel the real need is the coordinating of an efficient system of disseminating information about available evaluations on the newer media. This could be an important service for a bibliographical control center.

The important practice of selecting a film after having screened it suggests an area in which this conference might direct its attention. In observing what role a publication like Landers Film Reviews plays in the work of an A-V director, I have concluded that A-V directors would respond to a program that would help train the classroom teachers in their jurisdiction on how to utilize A-V aids with maximum effectiveness. To illustrate the importance of such a program let us take note of one of the largest educational film companies in the field—this company has an instructor traveling throughout the country demonstrating to teachers how to use their science series. Let me emphasize this man is not a salesman—his job is to instruct. But this is only one company. I would propose that this conference develop this kind of activity to the maximum. I think it would be most helpful to the school film users if workshops were set up all over the country as a continuous activity to demonstrate the best teaching techniques in various media.

We might also direct our attention to the problem of the producers. I am constantly concerned over the waste in film production—waste caused by duplication. It is not unusual to receive 4 or 5 films a month on the same subject, handled from almost the same point of view and for the same age or grade level. Obviously, only one or two can be absorbed by the school systems; and the salesman who gets there first is the one who more than likely makes the sale. Then too, there is much waste on subject matter, particularly among the hundreds of "one-man operations." These often-talented film-makers produce films with no conception of the needs. A short talk with them after the film is made indicates that with a little guidance before the film is made they would have produced something not only imaginative in the film sense but also constructive in the educational sense. I think it is extremely important that these film-makers, many of them young people, be given all possible assistance. To this end the conference might consider the possibility of preparing and circulating an annual guide for film-makers. It would help orient them in the direction of school needs.

In conclusion I recommend that this conference direct its attention to these 3 areas:

1. Some efficient system of disseminating information about available reviews and evaluations on newer media already in existence—preferably to be gathered by machine data methods and printed on 3x5 cards.

2. Workshops to demonstrate to teachers the most effective way to utilize the newer media.

3. Assistance and guides for producers, first to do away with waste or over-duplication and, further, to direct the needs in the curriculum.

These seem to me to be in keeping with NDEA program.

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* Quoted from a letter from Maurice B. Mitchell, president, Encyclopaedia Britannica Films, to Miss Bertha Landers, dated September 23, 1960.

REACTIONS OF THE LIBRARY OF CONGRESS CONCERNING THE PROPOSAL FOR A NATIONAL BIBLIOGRAPHIC CONTROL SYSTEM FOR NEWER EDUCATIONAL MEDIA

C. Sumner Spalding

It is to the first service described in the *Proposal for Bibliographic Control of the Newer Educational Media* to which most of my remarks will be addressed this morning. Of the three services described, the experience of the Library of Congress is entirely limited to that of providing bibliographical control in the form of a published bibliography, *Motion Pictures and Filmstrips*, a part of its series of book-form catalogs, and in the form of a card service for the titles published therein. These services started late in 1951 and by now have been in operation for 9 years. At the present time we have cards for some 36,000 motion pictures and filmstrips (excluding theatricals) and we add to this total about 3,000 titles a year. Our catalog is issued quarterly with annual and five-year cumulations and provides a title list with summaries but without evaluations and provides approaches by subject and by producer. Its attempted scope is all motion pictures and filmstrips of educational or instructive value that are released in the United States and Canada. The catalog cards may be ordered for individual titles, for all titles on a given subject, or for all titles in the medium.

Our coverage of educational audio materials is less extensive. For one thing we have not yet undertaken to catalog phonotapes. On the other hand we are getting increasing coverage of the non-musical phonodisc output. These materials now constitute over 5% of the total number of phonodiscs we catalog, or about 150 titles a year.

Since our major effort is in the field of motion pictures and filmstrips, however, I would like to confine my observations to this field. The first thing I would like to call attention to is that the intended scope of the LC program is much the same as that we are assembled to discuss. We fall considerably short in our attempt at comprehensive coverage. Just *how far* short we don't know, and apparently no one can say exactly. The H. W. Wilson catalog has much the same scope except for its exclusion of government films and films for professional training. The number of titles added annually to the *Educational Film Guide* is about the same as that added to ours. Both the area of overlap between the two catalogs and the area of unique coverage is sizeable. Yet, it would further appear that a significant number of films of educational value are not listed in either of these two catalogs. This lack of success in achieving comprehensiveness must be considered in the light of continuing efforts on the part of both to achieve the greatest measure of bibliographical control that is possible.

When our program was first started a very extensive effort was undertaken to engage the interest of producers and to secure their effective cooperation. At the same time potential consumers, particularly the responsible officers in school systems, were contacted and given an explanation of the nature and advantages of the new service. Brochures were written, sample sets of cards were prepared, letters by the thousands were sent out. In one year Mr. Angell and Mr. Walter travelled 22,000 miles to appear before producers, consumers, and audio-visual groups of all kinds as spreaders of the word.

Although the extent of efforts in the way of personal contacts is small now in relation to what it was in the beginning phases of the program, the effort to secure participation by film producers goes on apace. Periodicals and news notes in the field are systematically scanned for leads to new producers that should receive our literature soliciting participation. Card orders for films made by producers not presently contributing data result in our sending requests to these producers to get into the swim. In spite of our best efforts, however, some 25% of our letters are barren of results. In fact we have now accumulated after nine years a file of producers that have not contributed data that is three times the size of our file of active contributors. Of course many of the former are probably no longer in business but this file is a constant reminder of the severity of the problem. In addition, even relatively regular contributors may have to be jogged from time to time to keep the representation of their films current and complete.

Now the proposal we have before us has as one of its principal aims the provision of a comprehensiveness of bibliographical listing that present services fail to offer. And there will be no one, I suppose, who will do other than applaud this aim. But what is the means by which the failures of those now in the field are to be converted into successes? How is it proposed to crack the hard core of those producers that are disinterested, unwilling, uncomprehending, or, hardest of all, those that are unknown?

I hope there is a way to accomplish this task, or much of it. But until the way can be found and made known I do not see what guarantee there is that a new effort to conquer the dragon will be significantly more successful in this regard than present efforts.

If I may, I would like to offer some comments on the budget. Nothing can be more awkward, of course, than to have to plan a budget for an operation the size of which is practically unknown. Without a better notion of the number of titles that would go into the basic initial lists and the number of new titles to be processed per annum it is almost impossible to come to grips in specific terms with the problem of budget. Nevertheless, it seems that certain general observations may perhaps be valid. First the personnel budget has the appearance of a budget for run-of-the-mill years rather than for the initial years when the basic catalogs will be prepared. During these first years all the work of a regular year must be done plus work on all the active titles in existence at the time the catalog gets under way. For example, if the annual load is 6,000 titles (to be conservative) there must be 25,000 titles to get under control at the beginning point. If the basic catalog is to be compiled in two years, then the load for each of these years is 18,500 as compared with 6,000 thenceforth. Over and above this, there will have to be a very extensive effort just to get the project going, to get the word out, to get producers oriented to the new system, to get consumers prepared to consume the product. This illustrates one aspect of the extent of the problem in the initial years.

Now about the card service. If there were to be 37,000 titles brought under control in the first two years and if 100 cards were made for each title, that would amount to 3,700,000 cards. Has provision been made for equipment and for space for this store of cards?

If an appraisal takes one page of single spaced typing and if 1/2 of the films are selected for the special guides, that would come to over 9,000 pages of typing plus indexes just for the selected guides for each of the first two years.

I wonder if consideration has been given to the problem of maintenance of distributor and price information. It presumably would arise first when a selected guide is reissued in a second revised edition. If any films are still retained from the first edition will it not be necessary to recheck the distributor and price information before publishing? We found this was necessary in the Film Reference Guide for Medicine and Allied Sciences we prepared for the U.S. Interdepartmental Committee on Medical Training Aids. This operation constitutes a considerable added factor of cost.

Distributor information will presumably be of importance as long as a film is being distributed. But if a film is no longer distributed does it mean it has lost its usefulness as an educational medium? Should it be retired from listing in the bibliography and in the selected guides?

This consideration leads naturally to the major question of whether it would not be advisable to incorporate in a project of these dimensions the development of a union catalog of films available for use. It may very well be that this possibility has been explored and rejected but it seems as though this conference should give the idea some consideration.

As time passes and various schools and film libraries acquire prints would it not be useful to know where these prints exist providing they are available for loan on some basis or other? It might not be feasible to publish the holdings of prints in the current issues of the bibliography, but perhaps they could appear in the cumulations. At any rate a record of holdings could be maintained at the project office and a location service could be provided as needed. The installation and maintenance of a union catalog of educational media would constitute an added expense, of course, but it might be that its value would considerably exceed its cost. On the other hand producers might look askance at published information of this kind and might be uncooperative as a result. This is a question that would have to be explored.

Finally, how could the Library of Congress fit into this overall plan for the bibliographical control of newer educational media? As Miss Rufsvold has reported, Dr. Mumford has indicated that the Library would not be in a position to perform any of the services outlined in the proposal, if requested to do so, because of the critical shortage of space. On the other hand we would help in any way that is feasible. For example, our address files of cooperating and non-cooperating producers could be made available. The cataloging published on our printed cards is public property and could be used in whole or in part. If there is any way in which our experience would be of value, we would be at the service of the director or the editor.

As for our own program I assume we would continue without change until the continuing usefulness of our service for motion pictures and filmstrips appeared to be in question, at which time its discontinuation would have to be considered.

One last note before I yield the floor to the next speaker. This concerns the estimate of our cataloging costs at the Library of Congress that appears as an appendix to the proposal. Since the time that that computation was made, our salary scales have been increased, so it is already out of date. Of rather more significance, however, is the observation that our present operation is on too small a scale for optimum economy in use of manpower. If our volume were 8,000 titles a year, for example, our unit costs for solicitation would be reduced to $ .16 a title and our cataloging costs to $4.69 a title. The same caveats against projecting these figures to an operation under different conditions would have to be made, since there are factors in our operation that would be unique.

REACTION OF THE NATIONAL EDUCATIONAL TELEVISION AND RADIO CENTER CONCERNING THE PROPOSAL FOR A NATIONAL BIBLIOGRAPHIC CONTROL SYSTEM OF NEWER EDUCATIONAL MEDIA

Robert B. Hudson

The observations I shall make regarding the proposed Bibliographic Control of Newer Educational Media will be concerned with the newer educational medium of television. These will in fact be observations and not definitive data--television is too new a medium to have much of a history in bibliographic circles and the primary educational goals in its use traditionally are tied to the broadcast function. The picture has changed in recent years as educators and educational broadcasters have sought to bring television fully and without apology into the service of education.

My observations, then, will focus on the broadcaster's bibliographic needs in programming and on the bibliographic service that his product requires.

It has been said that there are enough educational films in this country to program a television station for ten years with no help from other program sources. Some are so bold as to suggest that the current yearly output of films in this country is sufficient to keep a television station programmed 8 hours per day without interruption. These views were rampant in 1953 when the National Educational Television and Radio Center was brought into being to assist the non-commercial educational station with its programming problem. An action taken by the Center even before it had a staff was to contract with the Film Council of America for an evaluation of certain classes of educational films from the standpoint of their utility and appropriateness to educational television. This was a tedious process and, I think it is fair to say, it was unproductive of many program series for television. Indeed, with rare exceptions, the so called educational film has not provided the broadcaster with a valuable source of purposeful program material.

This is no indictment of the educational film--it was designed mainly for classroom use in a context created by the teacher and the course of study. It is to say that these films have presented the TV program director with problems that he has been unable to cope with. He has no knowledge of and no information about many films and film sources; those he hears of he has to locate, screen, clear, rent. For the most part he comes up with odd and unrelated subjects that often can be dropped into the schedule only as filler.

Now it is true that more and more educational film series are being produced with television in mind and for use on either open or closed circuit systems, or as audio-visual materials in a simulated TV pattern. Yet, with the possible exception of several major distributors, information about these series travels slowly and often is dependent upon the random and capricious fallout of brochures, handbills and advertisements. With all due respect to the Wilson listing, it isn't of much help to the TV program director. I know of no TV station in possession of the Library of Congress cards. Some of them make use of Educator's Guide to Free Films.

There is gold in the mountains of educational films for television--commercial and educational stations and closed circuit systems in schools all can share in the strike--but like the mining of gold, there is the problem always of finding it, assaying the ore, separating it from the slag and getting it into productive circulation.

All of this is to say that television programmers need help in tapping educational films and film series as a valuable program source. They ask for a central intelligence agency that will reveal these riches. Will the proposed bibliographic control system offer that help to them?

Now let us take a look at the broadcaster's product;--that after-image of a television program captured on 16mm film or on videotape. Where are the film series that offer systematic learning opportunities, films grouped in some consecutive way that lifts them out of the category of incidental information? How are they finding their way into the audio-visual market, and how would bibliographic control facilitate this process?

In reviewing this problem, one must bear in mind, as noted earlier, that broadcasters, first radio and now television broadcasters, must develop programs that satisfy the requirements of their on-the-air transmissions. Over the past four decades, if those transmissions came at inconvenient or impossible times for the school, it generally was a lost cause unless the school could adjust to the rigid broadcast schedule. Furthermore, in the past, so narrowly did the broadcaster conceive his function that rarely did he obtain more than one time broadcast rights, both in script material and in talent performance. I personally saw hundreds of excellent American School of the Air programs and other CBS educational, cultural and public affairs programs almost without number shot into the air and disappear with no repeat broadcast possible and with no provision for reincarnation as audio-visual material. It should be noted, for the record, that occasionally the United States Office of Education and other interested agencies would plead a case and be rewarded by copyright holders and by guilds of performing artists with a waiver of rights that would permit audio-visual use of broadcast programs, but even here the material seldom was fed into an effective distribution pattern.

It was not until educational television came on the scene in the early fifties that television programs closely related to curriculum needs began to appear. Educational television stations and the National Educational Television and Radio Center may be credited with the breakthrough. They were followed by commercial television stations and networks, and by film producers who adopted television planning and production techniques. The educational film producers have added this new product, expensive and somewhat cumbersome though it be, to their catalogues and to their salesmen's sample cases. Although their marketing system is efficient, there must be thousands of teachers remaining with no knowledge of this new product, and one may safely infer that a central bibliographic control would be welcomed as much by these film producers as by others in the audio-visual field. Commercial stations and networks likewise may be expected to welcome such a bibliographic control. In the past two or three years the producers of some of the major television network documentary reports have cleared the material at the source for audio-visual uses as well as for the television broadcast. These have found their way into standard film distribution channels and are successful wherever their existence and availability is known.

The NET Film Service, operated in behalf of the National Educational Television and Radio Center by the Audio-Visual Center at Indiana University, is the major agency engaged in channeling television programs into audio-visual uses. (I hope that Mr. Larson will invite all of us to see the NET Film Library while we are in Bloomington.) More than 250 hours of educational television programs are fed into the NET Film Service each year, all of which are available for audio-visual uses. As these films and kinescopes are received in Bloomington they are evaluated and those series of programs best meeting specified audio-visual criteria are duplicated in quantity and placed in subdepositories in various places around the country. The NET Film Service publishes a catalogue and prints flyers by the thousands, but this, too, is a limited action. The materials exist, they are conveniently accessible, but who hears or knows about them? Bibliographic control is more important for us on the television side than for anyone else. Our product is extensive and varied, but we started late.

One final observation. The newly developed videotape recording process is a blessing to the broadcaster. It is a particular blessing to the NET network because duplication is easy and rapid and it permits the transmission of our programs without loss in technical quality. We are freed of the down-grading kinescope. But what is the effect of videotape recording on the potential audio-visual uses of educational television programs? Alas, for the moment they will have to be tape to kinescope transfers, albeit the quality may be somewhat better than in regular kinescopes since controls are more easily maintained. The greater promise, however, lies in the sought for development of videotape recording and playback equipment designed for school use. Manufacturers promise it in 1961. When that day comes, together with greatly enlarged television receiving tubes or magnified reflected images, the incidence of use of television recordings in classrooms--via open channel, closed circuit system, or simple playback unit--may be expected to rise on a curve, the pitch of which will vary directly with the information available to users.

May I reiterate, those of us in television working both at the programming end and at the job of extending the uses of our end product, recognize the urgent need for central bibliographic control of the newer educational media. We gladly lend encouragement and support to the Educational Media Council and to the United States Office of Education in the establishment of such a service.

REACTIONS TO PROPOSAL AND WAYS OF IMPLEMENTING A FEASIBLE NATIONAL BIBLIOGRAPHIC CONTROL SYSTEM*

Mary Helen Mahar

The U. S. Office of Education is not in any strict sense of the word a "publisher" of newer media bibliographic services. Its specialists, however, are engaged continually in making lists suggesting materials for teachers and pupils in various areas of curriculum and grade levels. The U. S. Government Films for Public Education Use was prepared in the Office of Education by Seerley Reid and others and is currently under revision.

For all of these projects, specialists make use of standard bibliographic tools, catalogs, and professional journals, and, of course, as far as possible, personally examine all materials appearing on these lists—usually published as circulars. The Educational Materials Laboratory of the Office of Education now has a fair sample of textbooks and tradebooks in current use in public schools of this country and a very limited collection of A-V materials, for the use of specialists and visitors doing research in materials at the Office of Education.

Bibliographic tools are mainly housed in the Department Library, although the Laboratory is also gradually strengthening its collection of catalogs and indexes. We hope for the development of a well-rounded materials collection as soon as possible. The location of audio-visual materials poses a major problem to Office of Education personnel, as well as to any selectors and users of these materials.

The first part of the proposal, A National Catalog of Newer Educational Media is, of course, essential to the further development of selection tools and to the selection process in the A-V field. Educators (including OE personnel) must know what we have in this field, in order, among other reasons, to know what we do not have in the field. I think of this proposed tool as bearing the same relationship to the A-V field as the U. S. Catalog and Cumulative Book Index to books, and I can see no valid reason for eliminating any available A-V materials because of date of publication, etc., I believe the catalog would be most useful divided into separate volumes by type of medium, and I believe it impractical both from the point of view of size of the final publication as well as being outside its basic purpose, to include annotations, grade levels, etc. although the bibliographic detail on the items themselves should be complete. It should, of course, be thoroughly indexed by subject. Such a catalog could be available in every school library, just like the CBI should be, and is in many instances. I believe we ought to recall that elementary and secondary school curriculums are not fragmented into such subjects as "teeth," "cold," and "butterflies," but the elementary school curriculum, particularly, uses the unit approach such as community life, and that librarians and teachers and A-V specialists in schools need to use several parts of a subject catalog at the same time that they are preparing a unit of study.

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* This is an unofficial transcript of a tape-recording of Miss Mahar's remarks at the conference. It is not an official statement cleared for release and should, therefore, not be quoted. The copy sent to author for corrections and clearance had not been received at time of preparing this report.

The second part, Guide to Selected Newer Educational Media, also is needed and important. There is a wealth of good and superior A-V material, and an equally rich supply of materials of inferior or dubious quality. Ideally, evaluations should be performed by teachers, librarians, and A-V personnel in local schools and school systems. In my experience in directing a school library over a period of 10 years, the evaluations by teachers and librarians of A-V materials before purchase was a relatively easy matter; A-V producers readily loaned copies of materials for this purpose. This is probably not practical in many parts of the country and on any large scale. In any event, it is always helpful to have at hand evaluation tools, and there should be a number of these, not just one, in order to consider various judgments on a piece of material. There are a number of tools in the book field which include evaluations by specialists. Each of these has its use; no one of them should be considered a bible of book selection. It seems to me that Part II could be a superior professional evaluation tool in the A-V field, and an encouragement to the initiations of others.

The proposal to include subject specialists around the country in the work of this project is excellent. Evaluation of materials focuses attention on the development of criteria, both general and special, for content, method, and production, and contributes to higher standards both in the production and selection of materials. This evaluation process would also help producers to understand the needs of education and would spread information on the availability of materials.

The critical appraisals in the samples for Part II given in proposal seemed to me unduly and unnecessarily long. More succinct appraisals would serve the purpose and save a great deal of space, print, and paper. We should recall that selection itself implies relative value.

The third part of the proposal is a needed service whether it is part of this project, or should be encouraged for existing professional periodicals is a question of this conference.

The location, selection, and utilization of printed and A-V materials for effective instruction for our children and youth is a complex task and done best by superior teachers. I believe that our teachers need both pre-service and in-service education both in the content and utilization of printed and audio-visual materials. As we produce tools for the evaluation of materials, we must recognize that final judgments belong to the professional teacher working effectively and with genuine purpose for quality instruction.

REACTIONS OF A PUBLISHER (R.R. BOWKER COMPANY) CONCERNING THE PROPOSAL FOR A NATIONAL BIBLIOGRAPHIC CONTROL SYSTEM FOR NEWER EDUCATIONAL MEDIA

Daniel Melcher

I am assuming that I am privileged to join your group not by reason of any experience in the media under discussion, of which I haven't any, but because my company issues a number of bibliographies of books. I will try to outline briefly the several services—ours and others—that have evolved in the field of books, and leave it to you to judge whether any of the book experience can be usefully brought to bear on the problems before us, either as patterns to adapt, or as pitfalls to avoid.

Most of your day-to-day questions about books are probably answered by "Books in Print" and its "Subject Guide." These are revised annually and provide up-to-date information about the available books of 1100 publishers. The current editions closed on July 10th, with information on 15,000 of the new books, as far as the publishers could see, and with listings of 125,000 books held over from earlier editions (possibly with changed prices) because still in print. About 15,000 books were pulled as reported "o.p."

Although "Books in Print" is the workhorse of any book reference desk, it would not by itself cover the needs of the researcher. Wilson's "Cumulative Book Index" covers not only the U.S. but the English speaking world; and through its annual volumes it is possible to trace books by period whether still in print or not.

The hundreds of published volumes of the catalog of the Library of Congress provide access to almost ten million books and pamphlets, and the National Union Catalog covers yet others.

When it comes to keeping up between major cumulations, you again can choose from a variety of services, from the monthly issues of the National Union Catalog—covering as many as 150,000 titles a year from all over the world—to the notices in the "Saturday Review" covering under 1,000.

About five or six thousand titles a year are to be found in the "Book Review Digest." The largest number of books actually reviewed by any one Journal is 4,000—covered in "Library Journal."

About 10,000 a year are briefly described from advance information in "Books to Come", where the listings appear one to four months in advance of publication.

About 15,000 a year are described in the "Publishers' Weekly" and the "American Book Publishing Record," from actual examination of the published book, and with full Library of Congress cataloging. Yet others, not covered here, are to be found in the bulletins of the U.S. Government Printing Office.

If you want a card service on the new books, you can get "Library Journal's" Reviews on Cards (4,000 a year), or even subscribe to a full set of the catalog cards of the Library of Congress.

The above-mentioned services cover all fields. There are also a number of selective services, including, for example, the annual "Textbooks in Print," the quarterly "Paperbound Books in Print," the annual "Best Books for Children," and Wilson's "Standard Catalog for High School Libraries," Wilson's "Children's Catalog," etc.

One thing that has struck me as I have listened to the discussion here is that we are talking of a service that would be as comprehensive as the National Union Catalog, which costs $263.00 a year, and at the same time as widely distributed as "Textbooks in Print," which costs $2 a year.

In other words, although books are still the most widely and universally used instructional media, (whatever the future may hold) and although they are under comparatively good bibliographical control, even the holdings of even the basic book bibliographies in the schools and colleges of the country is short of what we are talking of achieving for some sort of guide to the newer educational media.

Someone has ventured to ask whether the market for a good guide to A-V materials could be less than 25,000 copies. That is twice as many as we sell of "Books in Print," and more even than were distributed of "Textbooks in Print" even in the years when we used to mail it free to every superintendent.

No one can guess how many of a new service could be sold until he tries. But it is educational to try and make a count of those you might actually give it to, as a point of departure. Mr. Durr, here, thinks he could place 150 copies to advantage in Virginia. Virginia has about 1/50th of the U.S. population. Could we then assume that a carefully controlled distribution might place the book, if free, in 7500 places?

Of course, it has been suggested that possibly what we need is one or at any rate a limited number of central national sources of information about all available materials in all media—from which selective listings could be drawn for local use, and to which could be submitted questions left unanswered by the selective listings.

This has its parallel in books. Many a high school gets along with "Books in Print" or the "Standard Catalog for High School Libraries" until a difficult question requires inquiry through the nearest large library having the CBI or LC catalogs.

Whether a centralized A-V research service, to be effective, would require expensive automation, seems to me, however, to be no more essential than it is with books. I don't say we won't come to automation in book finding, although up to now it is rare and confined mainly to articles rather than books, but I do suggest that unless we can think our way to some sort of solution of our problem, using conventional bibliographic methods, we aren't likely to be rescued by any miracle of automation.

I think a good deal of truth about automation is concealed in the following story attributed to Minneapolis-Honeywell. As you know, it is hard for a big corporation to hold up its head in business circles nowadays unless it has a Univac, and Minneapolis-Honeywell ordered one and at the same time ordered its systems people to prepare the way for it. This took some doing. Formerly, every time a piece of paper crossed departmental lines, it had to be re-copied, usually in many copies. The systems men, armed with top level authority, labored long and hard, and knocked heads together, and cut out useless reports, and in general taught the left hand what the right hand was doing. They worked so well that the President of Minneapolis-Honeywell was able to report, after 18 months, that the resulting savings were already exceeding $400,000 a year—and, he added, the Univac itself had not even been installed!

I feel that I yield to no man—unless it be Ralph Shaw—in my love of automation. I am never happier than when devising an expensive but interesting electronic way to do a simple but dull clerical chore. But I do feel strongly that solutions to the problem before us will not come through hardware, unless preceded by hard thinking on objectives in which even the most unmechanical of us can participate.

One place where analogies between books and other media fail, it seems to me, is where rental sets in. Books, as a rule, are bought, not rented. Films, on the other hand, seem mostly to be rented—or borrowed free, as in Virginia. I know of no parallel in books, but the difference does make me wonder how many teachers (or principals either) are really interested in more than the catalog of the nearest A-V film center. What is the practical use to the average teacher of being told about materials that she cannot get? Do the schools in Virginia limit their choices to the films in the State catalog because they know of no others, or because these are free? If they are to be given help, would it not lie in getting more choice and more prints into the state film center, rather than in telling them of materials they are not expected to procure direct anyway? Is what we need a sort of cooperative catalog *of* film library holdings, or a research tool *for* film centers? And if one could produce a master, cross-media, all-embracing reference file, would it in fact be consulted by other than the most active curriculum builders, the rank-and-file waiting for the most part until integrated programs might be worked out for them?

Concern has been expressed over the need to record the existence and availability of lesser-known materials produced in out-of-the-way places. This objective seems to conflict with the more practical goal of limiting listings to materials that are "available" in the practical sense of the term.

Is there not a practical and existing procedure for giving new life to a valuable but neglected film by having its distribution taken on by one of the more active and businesslike distributors? This would seem better than to stimulate the sending of orders or inquiries to producers whose mail piles up while they are off in the wilds of Guatemala.

But let us come back to the problem of some kind of national information center. Someone, somewhere must compile A-V information, just as the Library of Congress compiles book information. If this function were now being discharged adequately, all kinds of selections or adaptations from it could be considered.

The Library of Congress is doing a portion of the job, as Mr. Spalding has told us, but does not pretend to be covering all the films or all the media, does not show prices, etc. Any real expansion of its activities is considered unlikely, since the Congress has already once been denied funds for that function; and LC also lacks space for expansion of any kind.

To my mind we need a National A-V Information Center. Perhaps fifty major research libraries are now keeping a copy of virtually every book published, while not one is doing the same for A-V. We need a place where, as a national responsibility, we keep the record straight as A-V history is made, a place logically vested with the legal right to claim copyright deposit, whether or not housed in the Library of Congress.

I don't suggest that such an A-V Information Center should keep in perpetuity a copy of every item recorded. I don't attempt to guess what restrictions should be placed on the viewing or auditing of its holdings. But I do think there should be such a Center, that it should be charged with cataloging and describing every item that becomes available, and that its entries should then be issued in card or published form, just as the cataloging work of the Library of Congress is available through such media as the "American Book Publishing Record"—from which, by the way, it is now possible to lift any entry by photographic means for use as an actual library card.

I might mention in passing that in some conversations with Robert M. Kingery at the New York Public Library, he suggested that there might be logic in locating a National A-V Information Center in New York anyway, perhaps under the NYPL, in view of New York's importance as a film producing center.

As regards a master catalog to presently available materials, I might report for its possible relevance here that the first real step forward in the book field was the so-called Publishers' Trade List Annual, first issued in 1876 and annually since. This is nothing more than a bound collection of publishers' catalog, all produced in the same trim size, all revised annually in June, and all delivered by July 10th to one binder in a quantity of (this year) 6000 copies. There is also a special indexed section in which smaller publishers may list their titles at from $5 a title to $75 a page when they don't feel it would pay them to supply a catalog of 4 or more pages.

At present 1100 publishers supply their information for the Publishers' Trade List Annual. And it was from this base that the "Books in Print" author-and-title index started in 1948, and that the "Subject Guide" started in 1957.

As I look back over my notes, I find I seem to be proposing three things:

1. Some kind of National A-V Information Center, charged with the central cataloging and description of every item in all media (whether or not all items cataloged are subsequently all kept.)

2. A quarterly similar to the "American Book Publishing Record," i.e., arranged by subject, but with index, based on the work of the National A-V Information Center.

3. An annual, combined catalog of all the more businesslike producers, patterned to some extent on the PUBLISHERS' TRADE LIST ANNUAL, BOOKS IN PRINT, SUBJECT GUIDE.

Item #1 would have public support, just as all research libraries have such support. Items #1 and #2 would aim at being comprehensive. Items #2 and #3 would aim at being self-sustaining.

RECOMMENDATIONS FOR IMPLEMENTING A NATIONAL SYSTEM OF BIBLIOGRAPHIC CONTROL OF THE NEWER EDUCATIONAL MEDIA

REPORT OF DISCUSSION GROUP ONE

Members: Don White, Chairman; Max U. Bildersee, Recorder; Lee W. Cochran; W. H. Durr; Emily S. Jones; Pauline Love; Ralph R. Shaw

The committee discussed the problem of bibliographic control and agreed that there was "need for expanded and complete bibliographic coverage of the field." Limited discussion of form indicated that there was opinion that the main body of such bibliography should include all materials of ready availability, and that a special section should include materials of limited availability.

The committee agreed that the instrument should not include evaluations as such.

Discussion of the term 'cross-media' was inconclusive and was tabled for later definition.

It was felt that the description of each item should give as full information as possible including, where pertinent:

Title
Color or black and white
Running time, or frames, or length
Producer and distributor
Year of production or release
Producer's indicated grade level
Content description including:
  nature of treatment (time lapse, animation, dramatization, documentary, etc.)
List price
Subject area indexing

It was agreed that this list was incomplete and should be subject to further, exhaustive study and expansion to be useful.

A resolution was prepared for submission to the group at the closing session which included the following:

1. Reiteration of need for a bibliography about newer educational media to insure the improvement of educational programs on all levels and to insure the effective utilization of government money being spent in the newer educational media.

2. A statement indicating that, in the group's opinion, it is beyond the ability of any private organization or group of private organizations to undertake to provide the bibliographic tools urgently needed. The complete resolution follows:

WHEREAS Complete and effectively designed bibliographic information about newer educational media is essential to:

a. Improvement of educational programs on all levels

b. To effective utilization of government money being spent in newer educational media; and

WHEREAS It is clearly beyond the ability of any private organization or group of private organizations to undertake to provide the bibliographic tools urgently needed ——

THEREFORE BE IT RESOLVED That it is the judgment of this assembly that it is urgent that the government take steps to initiate and support this service at the earliest possible time and at a level adequate to make these bibliographic tools truly effective ——

AND BE IT FURTHER RESOLVED In view of the urgent need for providing such information at the earliest possible date and in view of the fact that there are a number of public and private groups who could provide the services for individual parts or possibly the whole of this service, the government is urged to invite tenders for the performance of this service as soon as possible.

The above resolution was offered as a motion in Group One by Ralph R. Shaw and was seconded by Lee W. Cochran. It was reported in full to the assembly but no further action on it was taken.

REPORT OF DISCUSSION GROUP TWO

Members: John Bobbitt, Chairman; Elliott H. Kone, Recorder; Arthur F. Wertheimer; Mary Helen Mahar; Daniel Melcher; Seth Spaulding; I. Keith Tyler

Two producers of ongoing media information publications feel that a publication ought to be published once a year because most schools obtain their films by purchase or have a major bulk of rental orders only once a year. Another member felt that it ought to be an ongoing publication in several issues throughout a year, especially because of other than school personnel who are heavy film, filmstrip, and recording users.

The idea was debated about whether the information in a general media catalog should have part of the catalog devoted to film, another part to filmstrips, and still another part to recordings, and so on. Some thought this had obvious advantages. Other members of the group believed that the information should be intermixed so that all materials under a certain subject could be together. (In England, for instance, the catalog of educational materials contains mixed listings by subject without separation of physical groups of items.)

Mr. Melcher stated that he would like to go on record recommending that a national archive be set up in the U.S. for all films, filmstrips, recordings, and other media which have some measure of information or teaching value. Though the present study dealt with bibliographic control, the proposal was felt sufficiently important by the group to recommend it to the entire committee for expression as a project of serious consideration by governmental and educational authorities, as soon as possible.

Descriptive information about films for the catalog may be based upon a synopsis of the item which would be furnished by the producer, whenever possible, instead of the advertising "blurb" usually found in many listings. The producer's target of grade-level should be listed or considered by the editor.

Mr. Melcher said that he would like to investigate the background of the H. W. Wilson Co. decision to withdraw from its Educational Film Guide publication, to see if there was any further information available that would assist the project.

It was suggested that three existing organizations seem to be possible producers of the new catalog: the Educational Film Library Association, the Library of Congress (Mr. Spalding's division), and the R. R. Bowker Co.

The Educational Film Library Association's president made a formal expression of interest on behalf of EFLA to undertake the compilation and publication of the catalog, containing films, filmstrips, slide sets, recordings (tape and disc), TV materials, and other media which would be pertinent to the intent of the catalog.

EFLA had discussed the matter with its Board of Directors and the following suggestions were offered:

> That a committee be appointed by the Educational Media Council and the United State Office of Education to set up the operating procedure and resolve matters requiring the decision of such a committee.
>
> The publication would be undertaken under the supervision of EFLA, though parts of the program could be sub-contracted to other organizations willing and able to assist in getting the publication completed, and the actual printing could be performed by firms already engaged in manufacturing volumes and cards of the type envisaged.
>
> It was felt that the subsidy proposed by the Rufsvold-Guss report would likely be sufficient to get part I of the project underway. However, EFLA would request that additional funds be made available during the period following the first publication of the original catalog and while the first supplement is in preparation. By the time the first supplement is published, it should begin to be evident whether or not the catalog will be able to be self-sustaining.
>
> EFLA is interested in the project because its primary interest and work is in the field of film information. It has a large file of producers of educational media, and extensive information and files of the numerous films produced and evaluated over the years. Other sources have offered assistance, such as Yale University, which would turn over its 18,000 media catalogs and card files to EFLA, permanently, without charge.
>
> EFLA would hope to perform the task with the help of its present staff, an augmented work force of paid help and, if needed, some of the members of its 85 volunteer committees who could pitch-in on the initial job. The organization would endeavor to meet the target date of 1962 publication.

REPORT OF DISCUSSION GROUP THREE

Members: Ernest Tiemann, Chairman; John Flory, Recorder; Robert B. Hudson; Irving Lieberman; Richard Paulson; C. Sumner Spalding; W. Roger Zinn

Work Group III discussed the following topics:

Mr. Zinn outlined the bibliographic control problems which he encounters in connection with his work in the Audio-Visual Center at the Grand Rapids Public Schools.

One of the largest tasks of the year is the compilation and preparation of an A-V catalog which is then distributed to the individual teachers. Mr. Zinn compiles this catalog using data available from all types of sources--film lists, distributors catalogs, etc. He feels that more and better sources of bibliographic information about motion pictures, filmstrips, and related media are much to be desired.

A copy of the Wilson Educational Film Guide is located in each of the school buildings and is helpful in informing readers about the availability of films on specific topics. Mr. Zinn indicated that he would like to have the distributors of a film include with their release prints and teachers manuals, several copies of the appropriate Library of Congress Catalog Card for that particular film title. This would enable him to prepare his own school system's catalog more rapidly.

Group Three also discussed the advisability of having LC Cards indicate appropriate school grade level for the particular film in question.

Other data not now being supplied which are much needed by the customers for bibliographic services should include price, and distributor. It was also felt that the educational collaborator should be emphasized among the screen credits.

Mr. Paulson summed up the problem facing the overall conference as follows:

He felt that there are essentially four problems; (1) method of handling the bibliographic control of the newer educational media on a national basis; (2) archival functions that might be done on a national scale, particularly in connection with a pre-eminent collection of films, filmstrips, and related A-V media; (3) reviews of separate subject lists of film and related media; (4) a general information publication.

The group discussed these four points and Mr. Paulson summed up this part of the discussion as follows:

1. We can now set down specifications for bibliographic control and evaluate the value of the present cataloging service.

2. Recommendations for the establishment of a national archive of non-theatrical films, kinescope recordings, and other media could be made by this conference, even though it was not an item on the original agenda.

3. Specifications of useful things to be done and guidance to the field could be suggested by this conference without attempting to suggest the mechanism by which this bibliographic job might be achieved.

4. Apparently a publication is not now needed. Existing publications, according to a number of those present at the conference, could handle the adequate dissemination of news about new bibliographic techniques and resources.

Mr. Spalding of the Library of Congress explained that at the present time, the Library of Congress cataloging procedure does not attempt to include information about distributors of films, price information, and grade level.

Mr. Flory discussed the overall role of the Library of Congress and the extent to which its film cataloging services have helped the field and might be further augmented.

At this point, group three spent some time discussing what we mean by the phrase, "cross media."

Mr. Spalding indicated that he would be inclined to exclude books from the definition of this term, and to include films, strips, tapes, and those other items indicated and defined in connection with the conference's agenda.

It was felt by this group that the overall conference should decide what media should properly be included in the deliberations of the conference. It was also felt that the reactions of the overall conference participants would be helpful in ascertaining whether price and source information should be included as points to be normally covered in descriptive cataloging.

REPORT OF DISCUSSION GROUP FOUR

Members: Paul C. Reed, Chairman; Gerald F. Noxon, Recorder; A. Bruce Gaarder; Anna L. Hyer; Bertha Landers; Charles F. Schuller; Jesse H. Shera

I am afraid our report covers very much less ground than some of the others. On the other hand, it is rather precisely phrased and to get things into some kind of order, I have attempted to reproduce precisely the praseology agreed upon by the group.

This group is unanimously agreed on the need for a centralized source of information on materials readily available on a nation-wide basis used and useful for educational communication through the "newer media." The group interprets "newer media" in this context to include films, filmstrips, kinescopes, videotape recordings, planned pictures in sets, slides and other transparencies in sets, phonodiscs, phonotapes, cross-media packaged kits and systems. It is recognized that categories will be added in the future consisting of other special types of media as they become available.

Two questions were raised in connection with this listing. What about programmed materials for teaching machines? On this point we came to no conclusion because the materials seem to involve books; in fact, some of the so-called programmed material seems to be books only. If we are going to start involving books, the problem becomes very complex. This was a question that was somewhat left in the air. The other question was where will the line be drawn between musical and non-musical phonodiscs and phonotapes? In other words, are we going to exclude material which may consist of voice and other dramatic presentations in which music is also included as distinct from the sonata of Beethoven, etc. as purely musical items?

Secondly, as a group it is further agreed that the information referred to above should be presented in such a form and context as to meet the needs of potential purchasers, renters, and/or users. This, the group interprets, as a need for the information to be capable of efficient photo-reproduction or other kinds of reproduction for use on the national, regional, and local school system levels.

FINAL RECOMMENDATIONS
ADOPTED BY THE CONFERENCE

The following recommendations concerning the nature, procedures for providing, methods of disseminating information about, and finally evaluating the effectiveness of a national system of bibliographic control of the newer educational media were approved by the conference. They reflect ideas presented in the papers, in reports by the group recorders, and in small group and total conference deliberations. They were formulated on the basis of the participants' understanding of the explicit and implicit needs of users. They were critically examined, thoroughly discussed, and unanimously approved (one member, however, abstained from voting) as feasible ideas relevant to conceptualizing, implementing, and/or providing a national system of bibliographic control of the newer educational media.

1. A national descriptive bibliographic control system of the newer educational media—as comprehensive as possible—is an urgent necessity.

2. This system should provide information on all the newer educational media available on a nation-wide basis. The newer media, as defined by the conference, include: films; filmstrips; kinescopes; video-tape recordings; flat pictures in sets; slides and other transparencies in sets; phonodiscs and phonotapes; cross-media package kits and systems; and pertinent auto-instruction, step-increment-program materials not otherwise listed elsewhere as book or printed materials.

3. The collection of information in the bibliography should be in a format that will meet the needs of decision-making educational personnel in purchase or rental situations and the needs of all immediate or potential users of the materials. This means that in form and content the bibliography should be capable of being easily and efficiently reproduced in part or in whole for use at any educational level. The complete basic bibliography of materials must be in a form that is readily available to various groups of users or potential users and should make provision for needs of specialized groups. Likewise, in the compilation of the index or indices to this basic bibliography approaches facilitating the use of the information in ways other than those in the main file should be possible. In the judgment of the conference the bibliography should be brought up to date and published at intervals not exceeding one year and preferably more frequently. It is urged that the cataloging agency meet its publication schedule.

4. The nature of the descriptive matter concerning the items listed in the bibliography is to be factual and comprehensive. The question of evaluation or value judgments in connection with the items listed is specifically excluded from the scope of these recommendations. In the listings all relevant factual information concerning the items is to be presented according to the best established practice and incorporating such additional data as shall be desirable for new types of materials which may become available in the future.

5. The means of implementation should be pursued under the auspices of the U. S. Office of Education and at the same time a carefully planned and sustained campaign of publicity and information concerning the bibliography should be carried out among all potentially interested groups and organizations.

6. This project should receive federal support if it is determined that it cannot be carried on without federal support.

7. One agency should be named to take full responsibility for the development of the national system of bibliographic control of the newer media in terms recommended by this conference with the privilege of sub-contracting or otherwise delegating direct responsibility by various sections of the catalog.

8. While actual examination of items to be cataloged is highly desirable and may upon occasion be necessary, the cataloging agency is not to be required or expected to view or examine all individual items.

9. In addition to the complete catalog, the system should provide for other forms as seem desirable for the uses as they develop in the field.

10. In order that national interests be served through effective utilization of the catalog by having it in the greatest possible number of schools the primary element in determining price should be a desire to make the service available as inexpensively as possible.

11. The following three specific research or investigative projects should be undertaken concurrently with the collection of the material for the basic bibliography:

    a. A research program or investigation designed to insure the maximum utilization of the basic bibliography and to illuminate its future development in form and content in terms of its general and specialized users.

    b. A research study of the best means to accurately and comprehensively describe the content and format of a given item of material to be listed in the index so that such presentation may conform to a logical and sustained format.

In addition encouragement is needed for studies in alternative methods of production and reproduction of the bibliography to allow recasting it from the point of view of various types of users.

c. A research study in the field of international bibliography designed to permit the eventual introduction of foreign items into the basic U. S. bibliography and to facilitate the exchange of bibliographic information in the field by established or new channels.

12. In addition to the above recommendations, it is with the feelings of greatest urgency that the committee would like to add a further recommendation--not envisaged in the proposal we examined but intensely germane to it--that a national film archive for the preservation and documentation of United States newer media be established as soon as possible in order to halt at long last the dissipation of a great national, cultural heritage.

13. The committee would wish to convey to Margaret Rufsvold and Carolyn Guss their profound thanks for so ably bringing into focus the need for the bibliographic control of the newer educational media. The committee feels that in this it is expressing the feelings of the entire conference and of the community of educators in the United States.

CONFERENCE DIRECTORS' SUMMARY STATEMENT

It is the opinion of the conference directors that the primary purpose of the work conference—that of having the proposed plan critically examined and desired modification suggested by recognized leaders in the disciplines affecting or affected by the proposed system—was fully realized. All post-conference communications received by the directors from participants support this conclusion, and all except one (Appendix C) completely endorse the foregoing conference recommendations. This single exception must, of course, receive serious consideration.

The recommendations give general support to Part I of the Rufsvold-Guss May 14 proposal. Parts II and III, even though not primarily a concern of the conference, received much less support and were even seriously questioned. It is obvious that the services recommended in these sections of the proposal need further consideration before plans are undertaken to provide them on a national basis.

The differences between Part I of the proposal and the conference recommendations are differences of degree and specificity. The conference broadened the scope of the catalog by recommending that it include all types of newer educational media currently available and all additional types as they become available in the future. It further recommended that the information in each unit entry be as complete as possible including such additional bibliographical data as purchase price and educational consultants. The conference provided fairly specific recommendations concerning the relationship of the U. S. Office of Education to the project and the manner in which the project should be implemented. Whereas the proposal recommends evaluation of the bibliographic control system at the end of the first year, the conference agreed that it was not realistic to expect to have such a complex and large service functioning maximally at the end of the first year of its existence and therefore evaluation should be postponed until the second or third year of operation.

Appendix A

Agenda of USOE Work Conference on Bibliographic Control of Newer Educational Media

AGENDA

## USOE Work Conference on Bibliographic Control
of Newer Educational Media

Union Building
Distinguished Alumni Room

October 5-7, 1960

PURPOSE: To bring together qualified individuals representing (1) publishers of bibliographic information about the newer media, (2) consumers of these services, and (3) specialists in the storage, retrieval, and/or dissemination of information for the purposes of (1) exploring the possible methods of bibliographic control, (2) examining critically one proposed method, and (3) recommending the most feasible method of bibliographic control and ways of implementing it.

Co-chairmen: Lee Cochran
Ernest Tiemann

WEDNESDAY

First Session (1:30-4:30)

Conference Orientation and Introductions
Paper (30 min.) The Need for Dissemination of Information Concerning the Newer Educational Media - I. Keith Tyler

Symposium (15 min. papers) Bibliographic Needs of Consumers as Represented by:
- Elementary and Secondary Schools - Roger Zinn
- State Departments of Education - Henry Durr
- Colleges and Universities - Charles Schuller
- Public Libraries - Irving Lieberman
- Special Subject Fields: Modern Foreign Language - Bruce Gaarder
  - Science - Richard Paulson

Group Discussion

Reception (5:00-6:00) at Margaret Rufsvold's home, 1316 Longwood Drive

Second Session (8:00-10:00)

Paper (30 min.) Description of Present-Day Methods of Storage, Retrieval, and Dissemination of Information - Jesse Shera

Paper (30 min.) Critical Analysis of Present-Day Methods of Storage, Retrieval, and Dissemination of Information Including Comparison of Costs - Ralph Shaw

Group Discussion

THURSDAY

Third Session (9:00-11:30)

Review of Rufsvold-Guss May 14 Proposal - Carolyn Guss

Reactions of Publishers of Newer Media Bibliographic Services Concerning Proposal and Ways of Implementing a Feasible National Bibliographic Control System (12 min. papers) -

AIA - Pauline Love
Audio Cardalog - Max Bildersee
DAVI - Anna Hyer
EFLA - Emily Jones
Educational Screen and Blue Book - Paul Reed
Educators Progress Service - A.P. Horkheimer
H.W. Wilson Co. - Howard Haycraft's letter*
Landers Film Reviews - Bertha Landers
Library of Congress - C. Sumner Spalding
NET - Robert Hudson
USOE - Mary Helen Mahar
R.R. Bowker Co. - Daniel Melcher

Conference Luncheon (12:00-2:00) Federal Room, Union Building

Greetings from Indiana University - John W. Ashton, Vice-President for Graduate Development and Dean of the Graduate School

Report on Activities and Projects of the Educational Media Branch of USOE - Seth Spaulding

Fourth Session (2:30-5:00)

Discussion Groups to React to the Proposal and Ways of Implementing a Feasible National Bibliographic Control System

* Distributed to Conference. See Appendix .

Group I (D.A. Room)	Group II (D.A. Room)	Group III (Room G40)	Group IV (Room G42)
Bildersee (rec)	Bobbitt (ch)	Flory (rec)	Gaarder
Cochran	Horkheimer	Hudson	Hyer
Durr	Kone (rec)	Lieberman	Landers
Jones	Mahar	Paulson	Noxon (rec)
Love	Melcher	Spalding	Reed (ch)
Shaw	Spaulding	Tiemann (ch)	Schuller
White (ch)	Tyler	Zinn	Shera
	Whitenack		

Reports of Group Recorders (10 min. each)

__Fifth__ __Session__ (7:30-9:30)

Discussion Groups to Draft Recommendations for a National Bibliographic Control System and Its Implementation (Same grouping as above or to be re-structured according to conference directives).

Reports of Group Recorders (10 min. each)

FRIDAY

__Sixth__ __Session__ (8:30-11:00)

Formulation of Final Recommendations

Appendix B

Conference Participants with Biographical Statements

PARTICIPANTS*

Bildersee, Max U., Editor, Audio CARDALOG, Box 1771, Albany, New York

B.S. in Education, M.A. in Education, Teachers College, Columbia University. In-service teacher training in Chicago, New York, Schenectady and Albany Public Schools. Summer teaching at New College, Northwestern University, Michigan State College, Cornish School. Supervision in New York State Education Department. Audio Editor, Educational Screen and Audio Visual Guide; Editor, Audio Cardalog.

Bobbitt, John, Director of Research, Encyclopaedia Britannica Films, Inc., Wilmette, Illinois

1927-1931, completed undergraduate work at the University of Chicago; 1932-1936, completed graduate study for the Doctor's degree in American and modern European history and Political Science at the University of Chicago; 1936-1937, Pre-Doctoral Field Fellow National Scoial Science Research Council; 1937-1941, editor of Modern Age Books, New York, New York; 1941-1945, Intelligence Officer, Office of War Information, United States Government; 1945-1955, producer, E.B.F.; 1955-present, Director of Research, E.B.F.

Cochran, Lee W., Executive Assistant, Extension Division, and Director, Bureau of Audio-Visual Instruction, State University of Iowa, Iowa City, Iowa

Student Technician, Film Library, State University of Iowa, 1923-27; Supervisor, Film Library, State University of Iowa, 1928-32; Director, Bureau of Audio-Visual Instruction, State University of Iowa, 1932-43; Officer-In-Charge, Training Aids Section, Districts 1 & 13, U. S. Navy, 1943-46; Executive Assistant, Extension Division and Director, Audio-Visual Instruction, State University of Iowa, 1946-. Phi Delta Kappa, Epsilon Chapter. Department of Audio-Visual Instruction of NEA, past president, vice president, member of Executive Committee. At present, member of Board of Directors, and chairman of Field Service Committee and Iowa Planning Committee for Lake Okoboji Audio-Visual Leadership Conferences. Member of several other DAVI committees. Life member, National Education Association. Co-chairman of National University Extension Association's Division of Audio-Visual Communication 1960-61, and has served as chairman of this division on two previous occasions. Member of Board of Directors, School Facilities Council, 1960-61. Past President, Audio-Visual Education Association of Iowa. Advisory service to: Mutual Security Administrations-1 year, Cooperation Administration's Communications Media Evaluation Panel-2 years, Air University-3 years, and has served as consultant on several field service studies in audio-visual educatic Co-author of Manual of Audio-Visual Techniques, 1955, (Prentice-Hall), author of many magazine articles in Audio-Visual professional magazines both national and state.

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*Biographical statements based upon material provided by participants.

Durr, W. H., Supervisor, Bureau of Teaching Materials, Virginia State
Department of Education, Richmond 16, Virginia

Attended Western Washington College, Bellingham, Washington; Ocidential College, Los Angeles, California. Received Masters from Stangord University. Later did graduate work at University of Oregon; Teachers College, Columbia University; and University of Virginia. Prior to World War II served for 10 years as classroom teacher and later as Principal in western Washington public schools. During World War II served as Training-Aids Officer in the United States Navy. Supervisor of Audio-Visual Education for the Virginia State Department of Education since 1946. Conducted workshops and audio-visual classes for Western Washington College, University of Iowa and University of Florida. Past President of Chief State School Audio-Visual Officers. Co-Chairman of National Committee on equal postal rates for educational films 1952-53. Member of Editorial Board for EDUCATIONAL SCREEN magazine. Beginning January 1961 will be Deputy Superintendent for Audio-Visual Education, Hawaii State Department of Education.

Flory, John, Advisor on Non-Theatrical Films, Eastman Kodak Company,
Rochester 4, New York

Since 1950, in his capacity as Kodak's non-theatrical film advisor, Flory has worked with individuals and organizations all over the country that use motion pictures and other audio-visual aids for business, educational, religious, medical, television, governmental, scientific, and other purposes. A veteran of more than 26 years in the motion picture field, his background includes producing, directing, writing, and distributing motion pictures with five years in Hollywood on the production staff of Paramount Pictures, Inc. In the decade prior to 1950, he was President of Flory Films, Inc. He graduated from Yale University in 1932. A former member of the editorial staff of the Scripps-Howard daily newspaper, "The Cleveland Press." Visiting lecturer at University of Southern California, New York University, Western Reserve University, Boston University, the Cleveland Museum of Art, and others. Editor of *The Dollars and Sense of Business Films* and collaborator on *Graphic Communication and the Crisis in Education.* Member of the Society of Motion Picture and Television Engineers; Past Chairman of the Audio-Visual Committee, Association of National Advertisers; member of the Committee for Radio and Audio-Visual Education, National Council of Churches of Christ in the U.S.A. Advertising Council of Rochester; member of the Board of Trustees, the Reynolds Library; Trustee, University Film Foundation; member of the Audio-Visual Round Table, American Library Association; Association for Education by Radio-Television; Trustee, Audio-Visual Commission on Public Information; Educational Film Library Association; Secretary, Educational Film Producers Association from 1943 to 1950; National Audio-Visual Association; National Catholic Audio-Visual Educators Association; Department of Audio-Visual Instruction, National Education Association; Board of Governors, National Institute for Audio-Visual Selling from 1953 to 1954; Rochester Sales Executives Club, National

(Flory, John)
Sales Executives, National Television Film Council; Photographic Society of America; Radio and Television Executives Society; Rochester Chamber of Commerce; Society of American Archivists; Society of Photographic Scientists and Engineers; Delta Kappa Alpha Honorary Cinema Fraternity; and Project Coordinator of a contract between the SMPTE-USOE to study present and future needs (apparatus) of the A-V field. In 1951, he was Chairman of the First International Cataloging Conference.

Gaarder, A. Bruce, Specialist for Research, Language Development Section U.S. Office of Education, Washington 25, D.C.

A.B., New Mexico Highlands University; M.A., Doctor en Letras, National University of Mexico; Associate Professor of Spanish, Louisiana State University, 1947 to date (now on leave); Specialist for Research, Language Development Section (Title VI, NDEA) U. S. Office of Education, 1959--.

Guss, Carolyn, Associate Professor of Education, Associate in Selection, Audio-Visual Center, Indiana University, Bloomington, Indiana

A.B., Butler University, 1929; Graduate study, University of Chicago; Ed.D., Indiana University, 1952. For thirteen years she was a high school English teacher-librarian in Indiana. Joined the staff of Indiana University in 1942 as assistant in administration in the Audio-Visual Center and instructor in the School of Education, now head of the selection department and associate professor of education; has been responsible for the building of the film library at Indiana University and directing a program of information about these materials and their educational utility. Teaches graduate courses in the area of selection and integration of audio-visual materials and is directing a number of doctoral studies in the area of analyzing educational audio-visual materials. Author of numerous articles on film evaluation and selection and has conducted monthly departments--"Audio-Visual Materials" in N.E.A. Journal since 1952, and "New Films" in Educational Screen since 1942. Her article, "A Critical Survey of Resources for Locating and Selecting Audio-Visual Materials" in Audio-Visual Communication Review, Winter, 1955, relates to this proposal. Currently a member of the Editorial Board and Editorial Advisory Board of Audio-Visual Instruction, member of the Advisory Board to H. W. Wilson's Educational Film Guide, and a member of Advisory Board to USIA on selection of United States educational, scientific, and cultural motion pictures and filmstrips to be included in their catalogs recommending use abroad.

Horkheimer, Arthur P., Publisher, Educators Progress Service, Randolph, Wisconsin

La Crosse & Platteville, Stevens Point, Wis., STC; University of Wisconsin, School Commerce; Ph.B., Ripon College, 1932; University

(Horkheimer, Arthur P.)
of Wisconsin, School of Education. Life member, National Education Association; Wisconsin Education Association; American Library Association; Department of Audio-Visual Instruction, N.E.A.; Business Industry Section of National Science Teachers Association; Association for Supervision & Curriculum Development, N.E.A.; National & Wisconsin Councils for Social Studies; Educational Film Library Association; Phi Delta Kappa; R.O.T.C., 1918-21; author, Educators Question Book, 1936, Educators Guide to Free Films, 1941, Articles for Wisconsin Municipality; village pres., 1942 to date; Dodge County Board, 1950-55; exec. Comm. League of Wisconsin Municipalities, 1953-57, chmn. finance and taxation committee, 1958; vice president, 1955 and 1958; pres. 1959 to date; Member Resolutions Committee, American Municipal Association, 1959; rural teacher, Crawford County, Wisconsin, 1922-24; math, social studies instructor, coach, Highland, Wisconsin High School, publications, 1926-34; pub., owner, Educators Progress Service, 1934 to date.

Hudson, Robert B., Vice-President--Programming, National Educational Television and Radio Center, 10 Columbus Circle, New York 19, New York

Has coordinated programming activities of the National Educational Television and Radio Center since the organization officially began operations in 1953. As program head has supervised the development of a national program service for the noncommercial educational television stations. In May, 1954, the Center began its network services to the four stations which had come on the air. Since that time the NETRC has distributed nearly 4,500 programs in 200 different series and has grown to more than 50 noncommercial stations. Director of Broadcasting and Associate Professor of Journalism and Communications, University of Illinois, 1949-53; chariman of the UNESCO Committee on Television in 1952 and Consultant on Mass Media for The Fund for Adult Education for several years. Director of Education and Opinion Broadcasts for the Columbia Broadcasting System from 1945 to 1949. Director of the Rocky Mountain Radio Council in Denver, 1939-45 and guest lecturer at the Universities of Denver and Wyoming. During that period also consultant to the Radio Bureau of the Office of War Information.

Hyer, Anna L., Executive Secretary, Department ~~fd~~ of Audio-Visual Instruction National Education Association, 1201 16th Street, N.W., Washington 6, D.C.

B.S., Purdue U., 1932; M.S., Northwestern U. 1941; Ed. D., Indiana University, 1952. Science Teacher, guidance counselor, Mun~~ice~~cie, Ind. public schools, 1939-41; acting personnel director, Indiana University, audio-visual edn., 1945-48; audio-visual edn. and prodn. Syracuse U., 1948-51, adminstr. working in Iran and Turkey, overseas film project, 1951; asso. executive secretary department audio-visual instruction., assistant director division audio-visual instructional service NEA, 1957--; mng. editor AV Communication Review, 1953-57, editor

(Hyer, Anna L.)
Audio-Visual Instruction, 1958--; member NEA, Association for Higher Education, National Society for Study of Education, National Association Educational Broadcasters, Episcopalian. Author scripts for educational motion pictures including: Why Can't Jimmy Read, Dollars and Cents, Chucky Lou--A Story of a Woodchuck, others.

Jones, Emily S., Administrative Director, Educational Film Library Association, 250 West 57th Street, New York, New York

Rochester Public Schools and Vassar College, A.B., 1940. New York Public Library-Children's Room, assistant; Lakeside Publishing editorial assistant; Emerson York Studio, motion picture production assistant, since 1946, Executive Secretary (later Administrative Director) of Educational Film Library Association. Worked on films for USOE and OIAA, as well as private organizations, as production assistant and film editor; compiled number of film bibliographies and selected film lists published by EFLA: Active in New York Film Council; AVCOPI, EMC; magazine articles in Saturday Review, Educational Screen, Atlantic Monthly, and encyclopedia articles in Americana and Colliers.

Kone, Elliott H., President, Educational Film Library Association and Director, Audio-Visual Center, Yale University Audio-Visual Center, New Haven, Connecticut.

B.A., Yale University, 1949; M.A., Yale University, 1953; Co-Founder of Yale University Audio-Visual Center 1950; appointed director, 1952-. Charter founder, Delta Nu Chapter, Alpha Phi Omega, 1947, President 2 years, chief faculty advisor 9 years, National President Representative 3 years; and founder Yale Photographic Society, 1947, President 2 years, Chief faculty advisor 10 years. Producer of 35 16 mm motion pictures, 37 filmstrips, a 35 mm feature film, Runaway, numerous recordings. Film lecturer. Author of numerous articles and books including "Photographic Methods and Equipment Used for Engineering Reproduction", 70th Annual Report, Conn. Society of Civil Engineers, (1954). Connecticut Audio-Visual Education Association, president Board of Directors; Department of Audio-Visual Instruction, Board of Directors, Co-chairman of Northeast Regional Conference, Lake Okoboji National Leadership Conference Member; Educational Film Library Association, Inc. on Board of Directors, Vice-President, President, presided at first American Film Festival; University Film Producers Association, Publications Committee; American Federation of Film Societies; George Eastman House; National Association of Educational Broadcasters; Association for Education by Radio-TV.

Landers, Bertha, Publisher, The Landers Film Reviews, 4930 Coliseum Street Los Angeles 16, California

B.S. Art from Sul Ross State College, Alpine, Texas, Graduate work in education and social studies in El Paso, Texas and in Colorado

(Landers, Bertha)

Springs. Graduate work Colorado Springs Fine Arts Center, and Art Students League, N.Y., both on scholarship. Graduate work in the humanities at Kansas City University. Taught school in elementary grades in El Paso, Texas, and high school same city. Librarian in Dallas, Texas. Publisher and editor since 1956.

Lieberman, Irving, Director, School of Librarianship, University of Washington, Seattle, Washington

B.S. Accounting, New York University, 1935; B.S. Library Science Columbia University, 1939; M.A. Adult Education, Columbia University, 1950; Ed.D. Adult Education, Columbia University, 1955. 1935-1938, Library Asst., Public Library, Newark N.J.; 1939-1941, Branch Library Work, Public Library, Detroit, Mich.; 1942-1946, U.S. Army; 1944-1946, U.S. Army in Europe, Library Officer of European Theatre of Operations; 1946-1948, Head, Extension Division, Michigan State Library, Lansing, Michigan; 1948-1949, Consulting Positions, State Prison of Southern Michigan, Jackson, Michigan; American Library Association, Chicago, Illinois; 1949-1952, Special Assistant, Supt. of Central Service, Executive Assistant, Public Library, Brooklyn, N.Y.; 1952-1954, Research Associate in Charge Audio-Visual Project, University of California, Berkeley; 1954-1956, Associate in Library Service, Columbia University School of Library Science; 1956 to date, Director, School of Librarianship, University of Washington, Seattle, Washington. President, Pacific Northwest Library Association; Past Chairman, Teachers Section of Library Education Division, A.L.A.; Chairman of Audio-Visual Committee, A.L.A.; Member of Library Administrative Division Recruiting Committee, A.L.A.; Member of Board of Directors of Association of American Library Schools

Love, Pauline, Director, Publishing Department, American Library Association Headquarters, 50 East Huron Street, Chicago 11, Illinois

Attended elementary schools in Herington, Kansas and in California and graduated from the Alma, Kansas High School in 1929. Taught elementary grades in the rural school of Wabaunsee County, Kansas from 1929-1934, attending Kansas State College in the summertime. From 1934 to 1937 was a student at Kansas State Teachers College, Emporia, Kansas, where whe obtained a B.S. in Education and a Library Certificate in 1937. From 1937 to 1938 she was Assistant Librarian at Baker University during a leave of absence of the Assistant there. From 1938 to 1940 she was Librarian at Atchison High School Library, Atchison, Kansas. In 1941 Mrs. Love joined the staff on the Index Medicus of the American Medical Association as reviser of the Index, leaving there in August, 1942, to become the Editorial Assistant in the Publishing Department of the American Library Association. In 1943 was appointed Editor of Publications there, and in 1951 Director of the Publishing Department.

Mahar, Mary Helen, Specialist for School and Children's Libraries, Library Service Branch, Office of Education, Department of Health, Education, and Welfare, Washington 25, D. C.

New York State College for Teachers, Albany, A.B., 1935; B.S. in L.S., 1944; Columbia University School of Library Service, M.S., 1950. Teacher of English, Librarian, Pierson High School, Sag Harbor, N.Y., 1935-40; Asst. Librarian, Memorial High School, Pelham, N.Y., 1940-42; Librarian, Scotia High School, Scotia, N.Y., 1942-44; Librarian, Garden City High School, Garden City, N.Y., 1944-54; Visiting Instructor, St. John's University, Brooklyn, N.Y., 1948; Visiting Instructor, State University Teachers College, Genesee, N.Y., 1949-50; Visiting Instructor, Columbia University, School of Library Service, 1952-53. Fulbright Fellowship, Study of Library Services to Children and Young People, United Kingdom, 1951-52. American Library Association Observer to the United Nations, 1953-54. Executive Secretary, American Association of School Librarians, American Library Association, 1954-56. Professor, Division of Library Education, State University Teachers College, Geneseo, N.Y., 1956-57. Specialist for School and Children's Libraries, Library Services Branch, Office of Education, Department of Health, Education, and Welfare, Washington 25, D. C., 1957. Publications include Certification of School Librarians, A Compilation of State Requirements-1958. Bulletin 1958, No. 12. U. S. Department of Health, Education, and Welfare, Office of Education, 1958. "School Library Materials in Science, Mathematics, Modern Languages, and Guidance ... and How to Use Them," with Gerald B. Fisher. Reprint, School Life, January-February, 1959. State Department of Education Responsibilities for School Libraries. Misc. No. 35. U. S. Department of Health, Education, and Welfare, Office of Education, 1960.

Melcher, Daniel, Vice-President, R. R. Bowker Co., 62 West 45th Street, New York 36, New York.

Publicity Assistant, George Allen & Unwin, Publishers, London, 1934-35; Student (pub. methods) London & Leipzig, 1935; Publicity, Editorial Work & Sales, Henry Holt & Company, 1936; Advertising Manager, Oxford University Press, 1937-39; General Manager, Alliance Book Corporation, 1939-40; School Library Bookstore & Mail-Order Sales Promotion, The Viking Press, (All New York City), 1940-42; Publishing Consultant, War Finance Division, U. S. Treasury Department, Washington, D. C., 1942-43; National Dir. Edn. Section, War Finance Division, 1943-45; Director, National Committee on Atomic Information, Washington, D. C., 1946; General Manager, Director, R. R. Bowker Company, V.P., 1959. Author: Young Mr. Stone, Book Publisher, 1939; The Printing and Promotion Handbook, 1949-56; Pub. The Library Journal, Junior Libraries, Books from the U.S.A.

Noxon, Gerald F., Professor, School of Public Relations and Communications, Boston University, Boston Massachusetts.

B.A., M.A., Trinity College, Cambridge; Associate Professor Communication Arts, Boston University since 1947; Founder and First President of the Cambridge Film Society; Editor and publisher of "Experiment;" Publications Editor of the International Review of Educational Cinema, and member of the Documentary Film Production Unit of the Empire Marketing Board, London; Audio-Visual Director, Anglo-American Oil Company, London (Standard Oil of New Jersey); Director of Film Distribution and Road-showing for the General Post Office, London; Dramatic and Feature Writer of the B.B.C.; Head of Motion Picture Department of F.C. Pritchard Wood and Partners, London; Managing Director and Executive Producer of Spectator Short Films, and writer, director, and broadcaster for the B.B.C., C.B.S., N.B.C., C.B.C., and A.B.C. networks, particularly for the C.B.S. School of the Air and C.B.C. State Series. Organizer of the New England Film Fair, and the Castle Hill Film Festival; Treasurer of the American Society of Cinematologists.

Paulson, Richard, Director, Course Content Division, National Science Foundation, Washington 25, D. C.

Biographical statement unavailable.

Reed, Paul C., Director, Instructional Materials, Rochester Public Schools, Rochester, New York.

Rochester Public Schools; B.S., Middlebury College, 1929; M.A., Syracuse University, 1950. 1929-30, (On Leave, 1942-45, 1952-53) Board of Education, Rochester; Supervising Teacher, Supervisor, Director, Consultant in Field of Visual and Radio Education, Director, Department of Instructional Materials; organized and developed Department of Visual and Radio Education; in charge of Rochester School of the Air from 1933, which in 1947 evolved into the Empire State FM School of the Air. 1952-53, Assistant Director, Joint Committee on Educational Television. 1942-45, Consultant on 16mm Motion Pictures, Office of the Coordinator of Government Films; Head, Non-Theatrical Division, Bureau of Motion Pictures, Office of War Information; Visual Aids Specialist, Division of Visual Aids for War Training, U.S. Office of Education. Since 1947, Chairman of Steering Committee, Empire State FM School of the Air. Visiting Instructor: Northwestern, 1937-38; Syracuse University, 1940, 41, 48; American University, 1945; State University of Iowa, 1945; University of Rochester, 1949-55; Chautauqua Center of Syracuse University, 1954-55. Educational Screen Magazine, Editorial Advisory Board, 1941-45. Chairman, 1945-47; Department Editor, 1945-47; Acting Editor, 1947; Editor, since 1947; Study Committee on Educational TV, New York State Department of Education, 1955-56; Acting Executive Director, Rochester Area Educational TV Association, 1958-59. Advisor to Board of Trustees, since 1959; City County Citizens Committee for

(Reed, Paul C.)
Educational TV, Rochester, N. Y., 1954; New York State Audio-Visual Council, Temporary Chairman during organization period, 1948. Steering Committee, 1948-52; Film Council of America, Board of Trustees, 1947-51; Educational Film Library Association, Board of Directors, 1946-47; Secretary, 1946; Vice-President, 1947; Rochester Film Council, President, 1948-49; Department of Visual Instruction, N.E.A. President, 1940-41; Executive Committee, 1941-46; New York University Film Library, Recordings Division, Advisory Board, 1942-47; Building America, (a periodic picture-text for schools), Editorial Board, 1941-46; Association of School Film Libraries, Board of Directors, 1938-41.

Rufsvold, Margaret I., Professor of ~~Education~~ Library Science and Director, Division of Library Science, Indiana University, Bloomington, Indiana.

A.B. and Diploma in L.S. University of Wisconsin, 1929; M.A. (L.S.) George Peabody College for Teachers, 1933; Graduate Study, University of Chicago and Indiana University, 1942 to date. Miss Rufsvold was first a school librarian and later a college and university librarian during the period 1929-1938; joined the faculty of the School of Education in 1938 as Instructor in Library Science and is now Professor and Director of the Division of Library Science. Has taught library science during summer sessions at George Peabody College for Teachers (1933) and at the University of Southern California (1938), and directed an audio-visual clinic at the University of North Carolina (1949). Since November 1954 has been Consultant in Library Services and Instructional Materials for Thailand under a contract between Indiana University and the Ministry of Education in Bangkok, Thailand, sponsored by ICA; spent five months in Thailand (1955-56) setting up temporary libraries and planning facilities for new libraries, all of which include audio-visual materials. From 1945-49 was chairman of the Audio Visual Committee of the American Association of School Libraries; from 1948-52 a member of the American Library Association's Audio Visual Board (Chairman 1951-52); from 1951-52 an ALA representative on Executive Board of Film Council of America. Publications include: Audio Visual School Library Service, ALA, 1949; "Audio-Visual Materials and Libraries for Children and Young People," pp. 78-92 in Youth, Communication, and Libraries, ALA, 1949; "Building Library Collections: Audio Visual Materials," pp. 33-38 in The School Library Supervisor, ALA, 1956. Educational collaborator for the film, Library Story, EBF, 1952, and was in charge of producing a series of six telecasts "The World at Your Finger Tips" (Indiana University Radio and Television Service), in 1956.

Schuller, Charles F., Professor of Education and Director, Audio-Visual Center, Michigan State University, East Lansing, Michigan.

B.Ed., LaCrosse State Teachers College, 1929; Ph.M., University of Wisconsin, 1937; Ph.D., ibid., 1949. Experience: Teacher of Science, English Music, Coach, High School Arena, Wisconsin, 1929-30;

(Schuller, Charles F.)
Teacher of Social Studies, General Science, Principal, Junior High School, Edgerton, Wisconsin, 1930-36; Principal Coll., Junior High School, Teacher of Edn. and Political Science, State Teachers College, Whitewater, Wisconsin, 1936-46; Assistant Director, Bureau of Audio-Visual Instruction, Assistant Professor of Education, University of Wisconsin, 1946-52; Director, Audio-Visual Center, Professor of Education, Michigan State University, 1952-___. Hon. Pos., Board of Directors, Executive Committee, Department of Audio-Visual Instruction, NEA; President DAVI, 1958-59; Chairman, Audio-Visual Communications on Public Information; Executive Committee, Michigan and Wisconsin Departments of Audio-Visual Instruction. NEA Life member; DAVI, NEA; Division of Audio-Visual Communications (National University Extension Association); Soc. of Motion Picture and TV Engrs.; University Film Producers Assn.; Assn. for Supervision and Curriculum Development. Co-author: Audio-Visual Materials, Edn. for Teenagers, 1958. Editor, DAVI Yearbook, The School Administrator and His Audio-Visual Program, 1954. Contributes to See & Hear; Edn; The Nation's Schools; Ed. Screen; Michigan School Board Journal, etc. U.S. Naval Training, Audio-Visual Instr. U.S. Navy, 1943-46; Presently Cdr., U.S.N.R.

Shaw, Ralph R., Dean, Graduate School of Library Service, Rutgers University, New Brunswick, New Jersey.

M. A.B., Western Reserve 28; B.S., Columbia, 1929; M.S., 1931; Ph.D., Chicago, 1950. Distinguished Service Award, Junior Chamber of Commerce, 1939. Superior Service Award, U.S. Department of Agriculture, 1949; Melvil Dewey medal, 1953. Auth: Engineering Books available in America Prior to 1830-33; Theory and History of Bibliography 1934; International Activities of the American Library Association, 1947; Literary Property in the United States, 1950; Use of Photography for Clerical Routines, 1953; Ed: Management issue of Library Trends MEM: ALA, ACRL, Indiana LA (President, 1939) DC LA, SLA, Association of Research Libraries, American Doc. Inst., Inst. of Biological Science, AAAS. Board of Hon. Consultants of the US Army med. library; consultant to the Sec. of Commerce on Dissemination of Enemy Scientific Data; Consultant to U.S. veterans Administration for reorganization of the Library System; Member, board of expert examiners U. S. Civil Service Comm.; Adv. to the Prep Committee of UNESCO; Consultant to Supreme Commander, Allied Headquarters in the Pacific, Tokyo; Chief of U.S. Mission to the Royal Social Science Inf. Conf., London, 1948; Library and Management Surveys for UN, U.S. Department of State, Inter-American Inst. of Agricultural Science, American Medical Association, Food and Agricultural Organization of the UN, Oklahoma. Inventions: Photocharging, Photoclerk, Rapid Selector. Owner, Scarecrow Press. Assistant, Cleveland, 1923-28; Assistant, NYC, 1928-29; Senior assistant and chief bibliographer Engnr., Soc. Library, NYC, 1929-36; Chief Librarian, Gary, Indiana, 1936-40; Instructor in Bibliography, Columbia, 1936-37; U.S. Army Air Force, 1944-45; Instructor in Science Management, COL, 1951; Instructor in Science Management, WR, 1953; Director, U.S. Dept. of Agriculture Lib., 1940-54.

Shera, Jesse H., Dean, School of Library Science, Western Reserve University, Cleveland 6, Ohio.

A.B., Miami University, Oxford, Ohio, 1925; A.M., Yale University, 1927; Ph.D., University of Chicago, 1944. 1927-28, Asst. Cataloger, Miami University Library, Oxford, Ohio; 1928-38, Research Associate and Bibliographer, Scripps Foundation for Research in Population Problems, Miami University, Oxford, Ohio; 1940-41, Chief, Census Library Project, Library of Congress; 1941-44, Deputy Chief, Central Information Division, Office of Strategic Services (O.S.S.); 1944-47, Asst. Librarian, University of Chicago Library; 1947-51, Asst. Professor, Graduate Library School, University of Chicago; 1951-52, Associate Professor, Grad. Lib. Sch., U. of Chicago; 1952- , Dean, School of Library Science, Western Reserve University. Author: Foundations of the Public Library, University of Chicago Press; Documentation in Action, Reinhold; Information Systems in Documentation Interscience Publishers Inc.; The Classified Catalog (with Margaret E. Egan), American Library Association; Bibliographic Organization (also with Miss Egan), University of Chicago Press. U.S. Delegate to UNESCO Conference on Improving Bibliographic Services, Paris, 1950; Sent by National Science Foundation to International Conf. on Bibliographic Classification, Dorking, England, 1957. Lecturer on Documentation, Institute for Bibliography and Documentation of Brazil, Rio de Janeiro, 1957. Editor, American Documentation, 1953-60. Editor, Western Reserve University Press, 1954-59.

Spalding, C. Sumner, Chief, Descriptive Cataloging Division, Library of Congress, Washington 25, D. C.

A.B., M.A., Harvard University; B.S., School of Library Service, Columbia University. AFter a brief career in teaching and arranging music, Mr. Spalding turned to library work, in which field he has had experience at the Cooper Union Library and the Library of Congress. At the Library of Congress he worked first in the music division, then, after four years of Army service, as a Senior Cataloger of Music in the Descriptive Cataloging Division. In 1950 he was appointed Assistant Chief and in 1951 Chief of the catalog maintenance division. From 1953 to 1956 he served as Chief of the Serial Record Division and since September 1956 has held his present position as Chief of the Descriptive Cataloging Division. He is currently serving as a member of the Subcommittee on Catalogue of the U.S. National Commission for UNESCO; as Chairman of the Subcommittee on Transliteration of the American Standards Association's Sectional Committee Z39; as deputy member of the U.S. Board on Geographic Names; and as a member of the Catalog Code Revision Steering Committee of the Cataloging and Classification Section, Resources and Technical Services Division of the American Library Association.

Spaulding, Seth, Consultant, Educational Media Branch, Office of Educ., Department of Health, Education, and Welfare, Washington 25, D. C.

B.A., Mexico City College, Mexico; M.A. and Ph.D., Ohio State University. Has published in *Modern Language Journal*; *Hispania*; *Audio-Visual Communication Review*; *Educational Research Bulletin*; *Fundamental and Adult Education*; *Journal of the Burma Research Society*; *Burma Law Society Annual*; *UNESCO Monograph Series*; *Educ. Digest*; *Americas* (Pan American Union); *Institute of International Education News Bulletin*; and others. Bulletins range from *How to Have a Successful Conference* (with Edgar Dale, 1950) to *Publishing for the New Reading Audience* (with David Manning White, 1958). 1945-48, Teacher, elementary school and adult business school. 1948-51, Instructor, Ohio State University Lab. School; Research Assistant, Dr. Edgar Dale, Bureau of Educ. Research. 1951-54, Fundamental Education Program Specialist, Pan American Union, Washington 6, D. C. Development of experimental educational materials program for 20 Latin American countries affiliated with the Pan American Union. 1954-59, Sr. Advisor, Overseas Development Program, The Ford Foundation. Included development of an extensive educational materials program ($1 million annual budget) in Burma, including textbooks, reference books, training materials, adult education materials, etc., for the Burmese educational complex; surveys and seminars in the Middle and Far East (including a number of projects in cooperation with UNESCO). 1959- , As consultant, Educational Media Branch, U.S. Office of Education, Coordinates the Educational Materials and Services program of the Educational Media Branch.

Tiemann, Ernest, Associate Professor of Education and Director, Visual Instruction Bureau, University of Texas, Austin, Texas.

Associate Professor of Education and Director, Visual Instruction Bureau, The University of Texas, Austin, 1941 to date; Assistant Professor of Education and Assistant in Circulation, Indiana University, 1947-51; organized Teaching Materials Center, Pueblo Junior College, 1943-47; Elementary and Secondary classroom teaching (17 years), Falls City, Nebraska, and Pueblo, Colorado. A.B., Concordia Teachers College, 1928; M.A., Western State Teachers College, 1944; University of Wisconsin, SS 1943; Ed.D., Indiana University, 1951. Advisor, Educational Policies Commission, NEA, 1959-61. DAVI committee assignments (past & present): serving currently as Chairman of the Professional Audio-Visual and Teacher Education Committee and as a member of the Editorial Advisory Board of Audio-Visual Instruction; served as past chairman of the Certification Committee, the Convention Evaluation Committee, the President's

(Tiemann, Ernest)
Advisory Committee on Conventions; served as a member of National Convention Committee, 1957-59, the Legislative Committee, the Professional Education Committee, the Teacher Education Committee and the Editorial Board of Audio-Visual Communication Review. Member DAVI Board of Directors as Delegate-at-large, 1956-59 Past President, Texas Audio-Visual Education Association, 1952-55; Executive Secretary, 1956 to date; past chairman, Division of Audio-Visual Communications, National University Extension Association; participant, Lake Okoboji Leadership Conference, 1956-58; member of American Association of University Professors; National Education Association, Phi Delta Kappa; the Association of Supervision and Curriculum Development; Texas Elementary Principals and Supervisors Association. Contributor to professional journals and editor of the "Bridges for Ideas" Handbook Series: Tearsheets for Teaching, Bulletin Boards for Teaching, Felt Boards for Teaching. Lettering Techniques, Using the Consultant, Models for Teaching, Production of 2x2-Inch Slides for School Use, The Tape Recorder, and Educational Displays and Exhibits. President-elect, Department of Audio-Visual Instruction, National Education Association.

Tyler, I. Keith, Professor of Education and Director of Communications Workshops and Seminars, Telecommunications Center, Ohio State University, Columbus 10, Ohio.

Graduate of University of Nebraska; graduate work at Yale University; M.A. and Ph.D., Columbia University. Director of research of the public schools in Allegany County, Maryland, and assistant director of research and curriculum in the public schools of Oakland, California. Taught summers at the University of Illinois, the University of Missouri, the University of Oregon, Emory University, Brigham Young University, the University of Chicago, San Francisco State College and the University of Kansas City. In December, 1957, he directed a national seminar on research in educational broadcasting conducted by the National Association of Educational Broadcasters at the Ohio State University. As Director of the Institute for Education by Radio-TV, plans and administers annual internatl. meeting for broadcasters, educators and civic leaders. In 1947, served as educational consultant for War Department in the American Zone of Germany, where he worked with German educators and broadcasters on the improvement of educational broadcasting. Served on Panel for Public Education in Occupied Countries of the American Council on Education and on the Panel for Educational Broadcasting of the U.S. National Commission for UNESCO. In 1950, returned to Germany where he was on the staff of an international workshop in the social studies in Heidelberg, Germany. Member & former pres. of the Junior Town Meeting League and the Association for Education by Radio; Chairman, *ad hoc* Joint Committee on Educational TV; Member, permanent Joint Committee on Educational Television. Author of over 100 articles dealing with radio-TV-Education-curriculum; Editor and co-author, numerous books. October, 1954, Annual Award

(Tyler, I. Keith)
of Merit voted by Advisory Committee of the Chicago School Broadcast Conference for "outstanding and meritorious service in educ. radio." In the spring of 1955, received National Citizens Committee award for Educational TV; named honorary member of Alpha Epsilon Rho; one of 26 persons selected for "25th Anniversary Award" from he Institute for Education by Radio-TV. October, 1957, given the Annual Award of Merit of the National Association of Educational Broadcasters.

White, Don, Executive Vice-President, National Audio-Visual Association, Inc., Fairfax, Virginia.

B.C.S., University of Georgia Evening College; Graduate work, University of Georgia and Emory University. 1936-41, in charge of Audio-Visual Services, University System of Georgia; served in Training Aids Division of AAF; Photographic officer for India-China Division of the Air Transport Command; 1946, Executive Secretary of NAVA. Co-inventor of the "Inspecto-Film" automatic film inspecting machine. An officially registered lobbyist working on behalf of the Audio-Visual Industry in Washington.

Whitenack, Carolyn I., Associate Professor of Education, Purdue University, Lafayette, Indiana.

Taught in the public schools of Central Kentucky; taught library science at the University of Kentucky; was head cataloger and school library consultant of the Louisville Public Schools; formerly was director of school libraries and teaching materials, Indiana Dept. of Public Instruction; currently Associate Professor of Education, Purdue University. Past Chairman, NEA-ALA Joint Committee, 1957-58; member N.E.A., A.L.A. (library education division, resources and technical service division, American Association School Librarians, Young Adult Services Division, Library Administration Division). Association for Higher Education, A.S.C.D., D.A.V.I., AASL-ACRL DAVI Joint Committee, Indiana Hoosier Student Librarians Association, Indiana Library Association, Indiana School Librarians Association, Audio-Visual Instruction Director of Indiana, and at present 2nd Vice president of A.L.A. and president of Indiana School Librar~~y~~ians Association.

Zinn, W. Roger, Supervisor of Audio-Visual Instruction, Grand Rapids Public Schools, Grand Rapids, Michigan.

A.B., Alma College; M.A., University of Michigan. 1929-39, superintendent of schools, Oxford, Michigan; 1939-41, graduate work, University of Michigan; worked in adult education extension program. 1942-48, Educational Audio-Visual Producer and Utilization Specialist with Jane Handy Organization. Consultant, utilization of A-V

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(Zinn, W. Roger)
Materials and devices with the armed forces. With the coming of peace, he was transferred to the School Service Division of the company to help produce and improve utilization of filmstrips and films for schools. 1948-50, in charge of motion picture prod., Audio-Visual Center, Indiana University. In 1950 assumed present position in Grand Rapids Public Schools; also teaches courses in Audio-Visual Education for the Extension Division of the University of Michigan. Instructor during four summer sessions at Boston University, two summer sessions at the University of Michigan, and one summer at Western Michigan University. Member of Phi Delta Kappa, Association of University Professors, and an active participant in the work of his state education association and several national associations in audio-visual education.

Appendix C

Letter from A. P. Horkheimer, Educators Progress Service, to Dr. Seth Spaulding, USOE, in Reaction to Conference Recommendations

COPY EDUCATORS PROGRESS SERVICE COPY

Randolph, Wisconsin

October 12, 1960

Dr. Seth Spaulding, Consultant
Educational Media Branch
Office of Education
Department of Health,
Education and Welfare
Washington 25, D.C.

Dear Seth:

I should like to pursue a bit further the matter of our position relative to the recommendations coming out of the U.S.O.E. Work Conference at Bloomington, Indiana, last week. I refer, particularly, to our conversation after the conference was completed.

The final report says, "This bibliography should include information on all materials readily available on a nation-wide basis." Underlining is mine.

My first observation is that all materials includes all of the free materials listed in our guides. To this extent, the proposed bibliography will duplicate our publications. To this extent, the Federal Government will be performing a service in an area presently served by private enterprise. And, to the same extent, Government will be entering into competition with private enterprise.

This, as I pointed out at the conference, is in direct variance with the expressed views of the heads of both political parties and with the basic concepts of our form of government.

My second observation is that that part of your proposed project which overlaps our existing publications would result in "waste, duplication and frustrated effort" and might impede "the full use of the world's resources," as described in paragraph 4, bottom of page 2 and top of page 3 of The Rufsvold-Guss Proposal—Some Background Information and Relevant Questions.

It is our thought that the time and effort could be spent more advantageously to both the profession and the public on cost materials and other related research.

My third observation is that omission of free materials from your project would help to keep the bulk and cost of the completed publication down to a size and price where more schools would use and could afford to buy it. The service would, then, have greater utility and circulation in the profession than would otherwise be possible.

I should like, therefore, to suggest that those who make the final decisions on this matter consider the addition of the word "cost" to the report so that the words "all materials" shall be changed to "all cost materials."

It was nice meeting and chatting with you, Seth. You are doing a good job; best wishes for your continued success.

Sincerely,

EDUCATORS PROGRESS SERVICE

by

APH: lw

A. P. Horkheimer

cc: Charles F. Schuler, Director
Audio-Visual Center
Michigan State University
East Lansing, Michigan

cc: Carolyn Guss, Associate in Selection
Audio-Visual Center
Indiana University
Bloomington, Indiana

and

Margaret I. Rufsvold, Director
Division of Library Science
Indiana University
Bloomington, Indiana

Appendix D

Letter from Howard Haycraft, President of H. W. Wilson Co., Stating Their Position Relative to Continuing *Educational Film Guide* and *Filmstrip Guide*

C THE H. W. WILSON COMPANY C
O O
P Publishers of Indexes and Reference Works P
Y Y
950 University Avenue New York 52, N. Y.

September 19, 1960

Miss Margaret I. Rufsvold, Director
Division of Library Science
Indiana University
Bloomington, Indiana
and
Dr. Carolyn Guss
Audio Visual Center
Indiana University
Bloomington, Indiana

Dear Miss Rufsvold and Dr. Guss:

This will acknowledge and thank you for your memorandum of August 31st relative to the USOE Work Conference at Bloomington October 5-7--which I have been holding in the hope either that I could be present myself or that we could arrange to send someone to represent The H. W. Wilson Company. Unfortunately, this comes at a time when so many of our people are committed to attending various state and regional library conferences that I must reluctantly inform you that we will not be able to be represented in person, as I had very much hoped we could. I will therefore try to write this letter in such a way that it may be read at the third session of the Work Conference as a statement of our position; or duplicated; or used in any way that you think might be helpful. I hope that it will state our position as clearly, and contribute as much, as if we could be represented in person.

Perhaps as good a point to take off as any would be the pleasant visit by the two of you to the Wilson Company last May, in the course of which you outlined tentative plans for a possible new and comprehensive publication in the field of the newer educational media, and asked us a hypothetical question whether we might be interested in becoming the publishers of such a publication should it be undertaken. Our reply, now as then, is that while appreciating the compliment of being considered, we have no wish to be involved with the proposed new publication, with or without a subsidy.

Basically our position is this. Having carried the EDUCATIONAL FILM GUIDE and its offspring the FILMSTRIP GUIDE for almost twenty-five years at a loss, and being further confronted with rising costs and receding sales, despite concentrated promotional effort, we feel frankly that we should be entitled to bow out of this field and let somebody else carry the load.

In addition we have a growing conviction that some other type of organization can do a better job. We are quite frankly a library publishing house; not an educational publishing house—and there is an important difference between the two. When Mr. H. W. Wilson started the EDUCATIONAL FILM GUIDE in 1936 he believed that public, school, and college librarians would become the custodians of films just as they are of books. After almost twenty-five discouraging years, we are forced to the reluctant conclusion that with a few exceptions this is just not the case; that this responsibility is usually delegated to non-librarians in the educational system; and hence that a curriculum-oriented organization (such as, perhaps, some office or department of NEA or USOE) should be able to do a better job than a publisher geared exclusively to library sales and needs as we are. And if this is true of films, it is even more so of the other media under consideration.

In a previous letter, with which I believe the participants are familiar, we indicated that unless the decreasing trend of support of the EDUCATIONAL FILM GUIDE and FILMSTRIP GUIDE should be reversed, or unless we should be able to find some reputable and competent organization which would be willing to take over these publications, we might well be compelled to consider discontinuing them when the present units of supplementary service are completed in 1962. We will go farther at this time. As a company we are most reluctant to discontinue any of our publications which are performing a service. (I think the proof of this statement is the long period of time that we have carried the EDUCATIONAL FILM GUIDE and FILMSTRIP GUIDE at a loss.) We would therefore welcome the proposed comprehensive publication in the field of the newer educational media most enthusiastically. In fact, if the new publication should be able to get under way before 1962, and if the continued existence of the EDUCATIONAL FILM GUIDE and FILMSTRIP GUIDE should seem in any way to interfere or compete with the new publication, we should be willing to discontinue them at an earlier date with, of course, appropriate rebates to their subscribers; so as to give the new publication a clear track. We should also be willing, in such event, to turn over to the publisher of the new publication our materials, mailing lists, etc. for such value as they might have.

If the proposed publication should not be undertaken, we would continue to hope that some reputable organization can be found which would be willing to take over the EDUCATIONAL FILM GUIDE and FILMSTRIP GUIDE in 1962.

I have been trying to think what else I might say which would be helpful to the participants of the Work Conference, but I do not believe that there is anything I can add to your excellent summary in the middle of page 25 of your report of May 14, 1960, with which I assume all the conferees are familiar.

With best personal regards to you both, and sincere good wishes for the successful outcome of the Work Conference, I am,

Sincerely,

THE H. W. WILSON COMPANY

Howard Haycraft
President

HH:mh

Appendix E

Letter from Anne Cotter, President of Filmscope Inc., and Statement Regarding a National Directory of Educational Media

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FILMSCOPE INC. Box 397 • Sierra Madre, California

September 27, 1960 SPECIAL DELIVERY AIRMAIL

Dr. Carolyn Guss
Audio Visual Department
University of Indiana
Bloomington, Indiana

Dear Dr. Guss:

The current efforts toward providing a national directory of educational media are of the strongest personal interest to me. It is my earnest hope that you will accept this as a statement divorced from self-interest insofar as Filmscope is concerned.

Two years ago, as a citizen more than ordinarily concerned about education, I left a highly remunerative position in private industry to form this company. It seemed to me that in this way my experience and my interests would best serve education. (I was not a stranger to education, having devoted all of my spare time to it, in many ways, for many years.)

Since then it has become clear to me that under existing conditions of distribution, both commercially and within the schools, educational media are often obsolete before they reach the classroom. It is also clear that schools are charged with an oppressive and impossible task of keeping informed about, and correlating materials from all sources.

With a desire to contribute to a solution (apart from my function at Filmscope) I looked for a means by which some of the burden could be removed from the schools. Drawing upon my background as a manufacturing executive, specializing in finance, methods and procedures (including automation and data processing) and industrial training, it seemed to me that a useful beginning would be a single, cross-referenced catalog subscribed to by as many of the small producers as possible. Some steps had been taken toward implementing this idea when I began to hear rumors about the forthcoming demise of the H. W. Wilson directories, formation of the Educational Media Council, the October 5-7 meeting at the University of Indiana, and similar efforts.

Because so much can be accomplished by such groups, it seems well to throw my support to their effort. Sharing my thinking with you about a national directory, by means of the enclosed statement, is an expression of such support.

Cordially,

FILMSCOPE INC.

Anne E. Cotter
President

AEC:ss

A STATEMENT REGARDING A NATIONAL DIRECTORY OF EDUCATIONAL MEDIA

By Anne E. Cotter, President of Filmscope Inc.

1. A cross-media directory of educational materials, their major source, and their date of issue, is an imperative need.
2. The directory should be in file card form, prepared by means of punch card, or magnetic data processing.
3. Cards should contain code references to correlated materials.
4. The directory publisher should be a central depository for continuous information relative to materials from all producers, publishers, and national suppliers - and so publicized.
5. The directory should be rigorously kept free of evaluative material; it should contain only identifying descriptive information.
6. The directory should be supplemented monthly throughout the school year.
7. It should be administered by a national agency with sufficient funds, personnel, and "know-how", to assure continuous, efficient operation.
8. It should be directed by an executive familiar with the most modern equipment and methods for programming and processing massive data, and also with the preparation of large, frequently revised catalogs and directories.
9. It should be made available to all public schools, in sufficient number of copies to permit adequate cross-referencing preferably punched for machine sorting on school premises, or at a service bureau. (And for machine printing)
10. It should be made available to public schools at no charge, or at such nominal charge as that made by the United States Printing Office.
11. It should be made known to classroom teachers through continuous announcement in all state teachers' magazines.
12. It should be made available to producers, publishers, and other suppliers of educational media.
13. It should be available in public libraries, at least at the state level.

NOTES:

Anything short of a directory as described will be only a stop-gap, inevitably doomed to failure, prejudicial to another, more adequate directory.

Unless a national directory is kept entirely free of evaluative material, it will fail in its major purpose.

Evaluation should be diversified, and kept free of central control. A national directory might well include a section listing individuals, educational institutions, and other agencies which perform an evaluating service.

9-26-60

SOME INDIVIDUALS AND AGENCIES WHICH NOW EVALUATE EDUCATIONAL MEDIA

The following are in addition to NEA and its affiliated associations, state departments of education, state teachers' magazine, and many special journals.

American Biology Teacher Magazine, Chicago, Illinois

ALA Bulletin, Chicago Illinois

American Library Association, Chicago, Illinois

Audio Cardalog, Albany, New York

Audio Visual Instruction Magazine, Washington, D. C.
    Robert Burgert, San Diego City Schools

Brother H. Charles (Biology), St. Mary's College, Winona, Minnesota

Chicago Schools Journal, Chicago, Illinois

Childhood Education Magazine, Washington, D. C.

Educators' Program Service, Randolph, Wisconsin

Educational Film Library Association, New York City, New York

Educational Screen Magazine
    Audio - Max U. Bildersee
    Filmstrips, Flat Pictures - Irene F. Cypher, New York University
    Films - Carolyn Guss, University of Indiana, Bloomington

Elementary Schools Journal, University of Chicago, Illinois

Film World and AV World News Magazine, Los Angeles, California

Grade Teacher Magazine

The Instructor Magazine
    Filmstrips - Irene F. Cypher, New York University
    Films - Don Smith, Kansas City Public Schools

Landers Film Reviews (Bertha Landers), Los Angeles, California

George Peabody College for Teachers, Nashville, Tennessee

Enoch Pratt Public Library, Baltimore, Maryland

Science Materials Review Center, Pennsylvania State University

Teaching Tools Magazine
    Cincinnati Board of Education
    Los Angeles County Schools
    St. Louis Board of Education
    University of Texas

U.S. Office of Education, Educational Materials Laboratory

Anne E. Cotter
9-26-60